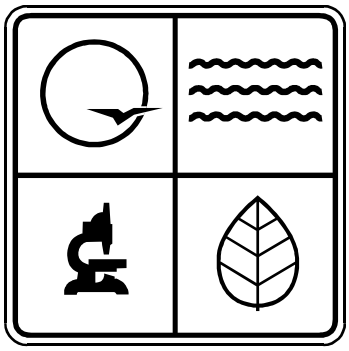
# MISSOURI
# WATER QUALITY REPORT
# (SECTION 305(b) REPORT)

2012

MISSOURI DEPARTMENT OF NATURAL RESOURCES



**WATER PROTECTION PROGRAM**

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# CHAPTER 1. EXECUTIVE SUMMARY

The Missouri Water Quality Report is published every two years. The report summarizes water quality issues and judges the degree of progress Missouri has made toward meeting Federal Clean Water Act goals. The water quality assessments made in this report will help direct future water quality management efforts to those waters most in need of restoration or protection.

## WATER RESOURCES AND PROBLEMS

Missouri has an area of almost 69,000 square miles and a population of 6.0 million people, according to the 2010 census. Nearly half of the population is concentrated on opposite sides of the state in the Kansas City and St. Louis metro areas, leaving most of the state and its waters rural in nature. Surface and groundwater in Missouri are quite varied in quantity and quality, corresponding closely with geology and land use.

### Northern and Western Missouri

Northern and western Missouri, originally prairie land, are now used primarily for crop and livestock production and are underlain by bedrock containing several relatively impermeable shale and clay layers. Surface waters are more turbid and are greatly affected by high rates of sediment deposition. These deposits, caused by soil erosion, result in poor aquatic habitat due to the fine, unstable materials of stream bottoms. Up to 8,000 miles of classified streams may be affected by these processes or other types of degradation of aquatic habitat, such as flow modification or channelization.

Rivers and reservoirs used as drinking water supplies often contain herbicides. In the recent past, several reservoirs that served as public drinking water reservoirs exceeded drinking water standards for atrazine or health advisory levels for cyanazine. Currently, however, there are no actively used drinking water reservoirs for which atrazine or cyanazine exceed these levels. This is due in part to local watershed management programs aimed at reducing herbicide runoff. Several other herbicides are occasionally found in drinking water reservoirs, also at concentrations below health advisory levels.

The quality of groundwater in northern and western Missouri is also influenced by the geology of the area. Public water supply sources include reservoirs and wells. The wells obtain water primarily from glacial drift deposits in portions of north-central and western Missouri. Wells in western Missouri, south of Kansas City, obtain water from limestone aquifers, except for the extreme western limits of Missouri, near the state border with Kansas. Private water supplies are obtained from glacial drift deposits and from underlying limestone bedrock in portions of northwestern, central, eastern, and northeastern Missouri. However, deep bedrock wells in many north-central and northwestern Missouri locations tap water supplies too mineralized for drinking water purposes. It is believed that a minority of private wells in this part of Missouri may exceed the drinking water standard for nitrate, and a very small number for pesticides. This contamination is often caused by localized surface contamination of the wellhead and does not represent widespread contamination of the underground aquifer. Deeper aquifers are well protected from surface contamination by impermeable strata.

### The Ozark Plateau

The Ozark Plateau, including the Springfield Plateau, consists of predominantly hilly topography. There are some very rugged portions, as well as significant areas of gentle to almost flat landscape. The bedrock, consisting of limestone, dolomite, and sandstone, yields groundwater of excellent quality, generally requiring no treatment and adequate in supply for most urban, industrial, and other needs. The soil or subsoil has developed by weathering from the bedrock formations and is generally 20 to 80 feet thick.

Some areas have extremely thin soils, and other locations where weathering has been extensive have a thickness of 100 feet and more. The subsoil has moderate to high infiltration rates, which contribute to the recharge of groundwater supplies. Ozark streams are generally clear, with baseflows well sustained by

many seeps and springs. Some streams and reservoirs in the Ozarks are becoming nutrient and algae enriched due to increasing human population and domestic animal production in their watersheds.

Groundwater contamination risks are moderate to high due to the permeability of the soil and bedrock. Any number of surface activities, including agricultural and suburban-urban storm water and wastewater disposal, mining, storm water runoff, lawn care, improper well construction or closure, and individual on-site wastewater disposal practices, pose threats to surface water and groundwater quality. However, overall water quality remains good, due in large part to the efforts of all parties to protect the aquifers.

Groundwater is relied upon heavily for drinking water supply in this part of Missouri. Most municipalities in the southern half of the state rely on groundwater for drinking water supply. The number of private drinking water wells statewide is not known, but is probably between 100,000 and 250,000, mostly south of the Missouri River. The major groundwater concern is the often rapid and unfiltered transmission of contaminated surface runoff or leachate from some septic tanks, underground storage tanks, landfills, dumps, and liquid waste storage ponds, and animal production or processing wastes through fractures or sinkholes directly into potable aquifers. Properly cased wells into deep aquifers rarely encounter water quality problems, but shallow or improperly cased wells are at risk.

In the Joplin area, the shallow bedrock aquifer contains elevated levels of sulfate and several heavy metals due to mineralization of groundwater in flooded mines. Some private wells in this area exceed drinking water standards for lead or cadmium. Localized contamination of shallow private wells due to leaks, spills and improper disposal of industrial or commercial chemicals occurs in the larger metro areas of Springfield and Joplin.

The Mississippi Embayment

Missouri's southeastern corner is a large alluvial plain of the Mississippi River. Originally a vast system of wetlands, it has been drained and almost entirely converted to crop production. Almost all surface waters in the area are drainage ditches and may not attain beneficial uses because of degradation of aquatic habitat due to channelization. Channelization creates a homogeneous, low quality aquatic habitat. Sloughing of the channel banks, which fills the channel bottoms, buries better habitat, and leaves unstable substrate, is a problem.

Groundwater is abundant due to high infiltration rates on these flat fields. Public water supplies that tap deeper aquifers provide good quality water, but shallow private wells commonly have nitrates and low levels of pesticides. The frequency of exceedence of drinking water standards for nitrates and pesticides in private wells would be roughly similar to that in northern Missouri.

Alluvial Aquifers

The remaining major aquifer is the alluvial aquifer system of the major rivers of the state. In northern Missouri, where surface and deep aquifer supplies are unreliable, many towns depend on the alluvial aquifer of a large nearby stream. Landfills and industrial land use in Kansas City and St. Louis have historically been located on river floodplains and have caused local contamination of the Mississippi, Missouri and Meramec river aquifers in St. Louis and the Missouri River aquifer in Kansas City. Some municipal water supplies have been affected.

## WATER POLLUTION CONTROL ACTIVITIES

Authority for enforcement of the Missouri Clean Water Law and for state regulations concerning water pollution resides with the Department of Natural Resources' Water Protection Program. Authority for the regulation of pesticide application rests with the Missouri Department of Agriculture. A permit from the Department of Natural Resources is not normally required to apply pesticides.

Point Source Controls

In order to legally discharge pollutants to waterways in Missouri, a party must obtain a National Pollutant Discharge Elimination System (NPDES) permit from the Department of Natural Resources. This permit sets limits on the amounts of certain pollutants that can be discharged. It may also set requirements for monitoring the effluent or the receiving stream.

The number of miles of classified streams judged to be impaired by point source wastewater discharges is somewhat greater than the estimate from 1984, when statewide data on stream quality first became available. In 1984, 105 miles of classified stream were judged to be impaired by domestic or industrial wastewater. Domestic and industrial discharges include wastewater from cities, subdivisions, apartment complexes, mobile home parks, businesses and industries. Stream miles impaired by point source discharges in more recent years were 101 miles in 2004, 83 miles in 2006, 70 miles in 2008, 170 miles in 2010, and 286 miles in 2012. The change in impaired mileage during the recent reporting cycles may be due in part to evolving data requirements and analytical methods, as prescribed by Missouri's 303(d) Listing Methodology. Also, water quality monitoring may be more appropriately targeted than it has been in the past, and the number of permitted point source discharges is likely higher than it was in 1984.

Hog and poultry production in concentrated animal feeding operations (CAFOs) are now major agri-businesses in Missouri. The large amount of animal waste generated at these facilities requires proper management to prevent water pollution. CAFOs are incorporated into the point source permit program, consistent with federal requirements.

Concern over eutrophication of large, recreationally important reservoirs led to changes in the state regulations for discharges of wastewater. These regulations impose phosphorus concentration limits on most wastewater discharges in the Table Rock Lake and Lake Taneycomo watersheds. These limits may be further affected as numeric nutrient criteria for lakes are implemented.

Nonpoint Source Controls

In recent years, several different types of nonpoint sources of pollution have come under regulatory control through a permitting process. Regulations are in place to prevent leakage from underground storage tanks and for the secondary containment of bulk agricultural chemical storage sites. Large sand and gravel mining operations require a general permit for storm water and smaller operations have been provided with guidelines for best management practices (BMPs), in addition to the 404 permit required of all sand and gravel operations. Storm water runoff discharge permits are issued for construction sites and other areas with more than one acre of bared ground. About 50 percent of all permits now issued by the Water Pollution Control Branch are storm water permits on land disturbance activities. Active mining areas that discharge water must operate under permits, although many abandoned mine lands still rely on voluntary controls. Many cities and large towns must now obtain storm water permits in order to manage pollution due to urban runoff.

Control of many agricultural nonpoint sources, such as erosion from cropland and pasture, or runoff of fertilizer, pesticides and animal waste, is addressed by Missouri's voluntary nonpoint source management program. This program works with federal, state and local governments, universities, private groups, and individual landowners to implement watershed projects that employ nonpoint source control practices and often monitor water quality results. Local watershed projects have resulted in significant reductions of atrazine levels in targeted drinking water reservoirs, in certain cases bringing them into compliance with water quality standards.

Programs with dedicated funding sources have worked best. A tax on coal has funded reclamation of abandoned coal-mined lands nationwide. Twenty-tfour years of such reclamation in Missouri has reduced the number of stream miles impaired by abandoned coal mine drainage from about 100 to about eight miles. A state sales tax for soil erosion control started providing funds for watershed level soil erosion control programs in 1985. This program, coupled with federal soil conservation programs, is reducing soil erosion in Missouri, based on the findings of periodic USDA National Resource Inventories.

Total Maximum Daily Loads

If a water body is deemed impaired by a pollutant, and it is determined that sufficient controls are not currently in place to protect water quality, it is placed on Missouri's Section 303(d) List. At this point, the Department is required to propose some form of additional pollution control that will restore the water to full attainment of the impaired use. This usually takes the form of a Total Maximum Daily Load, or TMDL. A TMDL is a document that includes a calculation of the amount of a specific pollutant a water body can absorb and still meet water quality standards. It also includes a plan to implement that limit, broken down into allocations from specific sources. Since 1999, DNR and EPA have established and implemented over 140 TMDLs and permits in lieu of TMDLs (PILOs). The current list of waters required to have TMDLs written, with the scheduled year of completion, can be found in Table 17 in Appendix 2.

## COSTS AND BENEFITS

The economic costs of wastewater treatment and nonpoint source management are extremely diffuse and difficult to calculate. The total operating costs of municipal, private, and industrial treatment plants are not readily available. Likewise, it is difficult to estimate total expenditures on nonpoint source management. The amounts that the State of Missouri spends on various aspects of water pollution control and prevention, however, may give some indication of the relative investments required.

The Missouri Department of Natural Resources annually spends about $2.8 million on monitoring and analysis of ambient water and related media. Approximately $3.7 million is spent on permit issuance annually and about $8.6 million on other facets of water pollution control and administrative support. Another significant expense is grants aimed at the improvement of water quality. The department awards an average of $4.0 million annually for projects to address nonpoint source pollution through the federal Section 319 grant funds and about $200,000 for water quality planning projects. The department's Soil and Water Conservation Program distributes more than $24 million each year directly to landowners to address agricultural nonpoint source pollution through the reduction of sediment and to conserve and protect the quality of water resources on agricultural land.

The economic benefits of improved water quality are even harder to quantify. Of all the money spent on water-based recreation and fishing in Missouri, it is nearly impossible to tell how much is dependent upon improved water quality. The same is true for the expense of drinking water treatment. But however great the economic benefits may be, the true benefits of clean water are high-quality recreation experiences, healthy and confident use of water resources, and a robust aquatic biological community.

## SIGNIFICANT THREATS TO WATER QUALITY

- Throughout the state, continuing suburban development impacts streams in several ways. Shortening and culverting of channels leads to the direct loss of streams and riparian areas. The increase in impervious surface area in the surrounding watershed leads to unnatural hydrograph patterns, with lower baseflow and higher stormflow. The altered channel and higher peak flows can increase erosion, while the runoff from the impervious surface carries increased levels of sediment and various chemicals from the urban environment. Elevated nutrient levels or bacterial contamination is also likely if individual or community domestic sewage systems are not well maintained.
- It is believed that channelization may have caused aquatic habitat degradation in roughly 32 percent of Missouri's streams, mainly in the northern and western plains and the southeastern lowlands. Large channelization projects affecting many miles of stream are no longer occurring, but many short projects still occur and continue to reduce the number of miles of natural stream channels statewide. Streams that were channelized many years ago still provide poor aquatic habitat, and these streams still contribute to flooding, high water velocities, and stream bank erosion as they try to recreate their natural sinuosity.
- Eutrophication of large, recreationally important reservoirs continues to be a concern. Heavy residential development around portions of these reservoirs can threaten water quality in many

small coves and shoreline areas. The large size of these lakes and rugged local topography make centralized collection and treatment systems for wastewater difficult. Recent imposition of phosphorus limits on most wastewater discharges to Table Rock Lake has improved conditions in the James River arm of the lake.

- Mercury levels in fish in Missouri appear to be generally stable in recent years. As monitoring of mercury in fish in various waters of the state continues, new waters with elevated levels may be found, but those waters that have been monitored for long periods have not shown significant recent shifts in mercury levels. Re-evaluation of human health risk factors for mercury has led the Missouri Department of Health and Senior Services to issue an advisory regarding fish consumption among children 12 years of age and under, pregnant women and women who may become pregnant. These people are advised to limit consumption of all fish caught in Missouri to one meal per week, and consumption of bass and walleye over 12 inches in length to one meal per month. For other aspects of the advisory, please refer to www.dhss.mo.gov/fishadvisory/.
- Abandoned lead-zinc mines and their tailings continue to impact waters decades after mining has ceased. Missouri's Superfund Program is addressing some of these concerns. But long-term impacts are expected to remain. Although new mineral extraction operations would be managed under state permits, areas of the state that are very sensitive to disruption are being investigated for mining potential.
- Additional groundwater protection measures are needed. Missouri now has in place programs that register and inspect underground storage tanks and oversee the cleanup of leaking underground storage tank sites, programs for wellhead protection, sealing of abandoned wells and closing of hazardous waste sites. A complete groundwater protection program would also include a groundwater monitoring network and educational programs for those involved in the application of farm chemicals, transporters of hazardous materials, and the general public.
- There are currently 473 Class I concentrated animal feeding operations (CAFOs) located in Missouri. These are operations containing at least 1,000 beef cattle, 2,500 large swine, or 100,000 broiler chickens. These facilities generate large amounts of animal manure and have the potential to cause serious water pollution problems. Commercial application of manure, often on fields at a great distance from its source, is also a growing trend within large-scale agriculture. The department is also concerned by cumulative impacts of numerous small animal production facilities. However, it is no longer issuing Letters of Approval for smaller facilities, meaning that they will be largely unregulated.
- Fish and invertebrates data indicate that many communities throughout the state are suffering from degraded quality of aquatic habitat. Physical alterations of the channel, alterations in stream flow patterns, degraded conditions in the riparian zone, and upland land use changes are all believed to be significant contributors to this problem.

**SURFACE WATER SUMMARY**

Table 1. Beneficial Use Support Status of Missouri Classified Waters.*

| STATUS | | STREAM MILES | % | LAKE ACRES | % |
|---|---|---|---|---|---|
| Assessed | Full Support of Uses | 4,328.9 | 17.7 | 126,461 | 41.8 |
| | Non-Support | 5,441.3 | 22.3 | 69,739 | 23.0 |
| Unassessed | Non-support Not Suspected | 11,356.7 | 46.5 | 106,276 | 35.1 |
| | Non-Support Suspected | 3,304.1 | 13.5 | 391 | 0.1 |

Numbers in Table 1 updated June 15, 2010.

Full Support of Uses: Water quality meets the needs of all uses that Missouri recognizes for a particular water body, such as protection of fish and other aquatic life (the water quality does not interfere with the ability of aquatic life to live, feed and reproduce), livestock and wildlife watering (the water will not cause disease or injury to livestock and wildlife using the water for drinking), drinking water supply (the water meets all state and federal standards as a drinking water supply source water), swimming (the water will not cause disease or injury to swimmers or others

participating in water-based recreation who may accidentally swallow small amounts of water), irrigation (the water will not cause disease or injury to crops), industrial water supply (the water will not cause excessive problems with corrosivity or mineral deposits in industrial piping and boilers), fish consumption (fish are safe to eat) and boating and canoeing.

Non-Support: Water quality is seriously affected to the point that at least one recognized use of the water body has been lost. These impairments are documented by data that meets the requirements of Missouri's 303(d) Listing Methodology.

Non-Support Not Suspected: There is inadequate information to make a water quality assessment of these waters, and the department knows of no data or information that would indicate a possible impairment.

Non-Support Suspected: These are waters for which some data or observations exist indicating that one or more designated uses may not be supported, but the data are not of sufficient quantity or quality to officially rate the water as impaired. The bulk of these waters are streams in the plains areas of the state, where nearly all streams have been affected or modified by agriculture.

* There are 24,431.0 miles of classified streams (permanently flowing streams or streams which maintain permanent pools during dry weather) and approximately 30,000 miles of unclassified streams (streams which are without water during dry weather). There are 302,867 surface acres of classified lakes. The number of surface acres of small unclassified lakes has not been estimated.

Table 2. Individual Use Support Summary for Classified Waters.

| BENEFICIAL USE | SIZE ASSESSED | FULL SUPPORT | NON-SUPPORT | NOT ASSESSED | USE NOT APPLICABLE |
|---|---|---|---|---|---|
| **STREAMS: MILES * (PERCENTAGE)** | 9,984.7 (40.9%) | 4,543.4 (18.6%) | 5,441.3 (22.3%) | 14,446.3 (59.1%) | 0 (0.0%) |
| AQUATIC LIFE AND FISH CONSUMPTION | 9,577.8 (39.2%) | 6,083.3 (24.9%) | 3,494.5 (14.3%) | 14,853.2 (60.8%) | 0 (0.0%) |
| SWIMMING | 4438.5 (18.2%) | 1,918.0 (7.9%) | 2,520.5 (10.3%) | 19,560.2 (80.1%) | 432.3 (1.8%) |
| DRINKING WATER | 1,337.5 (5.5%) | 1,337.5 (5.5%) | 0 (0.0%) | 2,073.0 (8.5%) | 21,020.5 (86.0%) |
| **LAKES: ACRES* (PERCENTAGE)** | 196,200 (64.8%) | 126,461 (41.8%) | 69,739 (23.0%) | 106,667 (35.2%) | 0 (0.0%) |
| AQUATIC LIFE AND FISH CONSUMPTION | 212,414 (70.1%) | 144,803 (47.8%) | 67,611 (22.3%) | 90,453 (29.9%) | 0 (0.0%) |
| SWIMMING | 221,340 (73.1%) | 221,340 (73.1%) | 0 (0.0%) | 81,527 (26.9%) | 0 (0.0%) |
| DRINKING WATER | 23,886 (7.9%) | 23,877 (7.9%) | 9 (0.0%) | 109,806 (36.3%) | 169,175 (55.9%) |

*The mileages and acreages for overall use support are more approximate than those for the individual uses, and may overestimate the streams and lakes that are not supporting uses. This is clear in the case of lakes, where Aquatic Life and Fish Consumption is the only use being impaired, and yet the overall use shows a slightly higher rate of impairment.

Table 3. Major Water Pollution Sources in Missouri Classified Waters.
(Stream Miles or Lake Acres Impaired)

| Source | Stream Miles Impaired | Percent of Total Miles | Lake Acres Impaired | Percent of Total Acres |
|---|---|---|---|---|
| Unknown | 2,006.4 | 8% | 1,740 | 1% |
| Agriculture | 1,088.1 | 4% | 640 | * |
| Grazing Activities | 55.8 | * | -- | -- |
| Crop Production | -- | -- | 9 | * |
| Urban Runoff and Construction | 1,031.8 | 4% | 49,055 | 16% |
| Atmospheric Deposition | 703.6 | 3% | 24,560 | 8% |
| Mining | 541.5 | 2% | -- | -- |
| Tailings | 515.7 | 2% | -- | -- |
| Other Mining Activities | 25.8 | * | -- | -- |
| Municipal and Other Domestic Point Sources | 324.1 | 1% | 48,434 | 16% |
| Hydromodification | 105.9 | * | 246 | * |
| Channelization | 66.4 | * | -- | -- |
| Flow Regulation/Modification | 29.0 | * | -- | -- |
| Upstream Impoundment | 10.5 | * | 246 | * |
| Industrial Point Sources | 41.8 | * | -- | -- |
| Rural Nonpoint Sources | 14.8 | * | 206 | -- |
| Natural Sources | 2.3 | * | -- | -- |
| Recreational Activities | 7.5 | * | -- | -- |

*Less than 1 percent

Table 4. Major Contaminants in Missouri Classified Waters.

| Contaminant | Stream Miles Impaired | Percent of Total Miles | Lake Acres Impaired | Percent of Total Acres |
|---|---|---|---|---|
| Bacteria | 2,945.0 | 12% | -- | -- |
| Metals | | | 24,560 | 8% |
| Mercury | 695.8 | 3% | 24,560 | 8% |
| Lead | 249.4 | 1% | -- | -- |
| Cadmium | 142.9 | 1% | -- | -- |
| Zinc | 126.7 | 1% | -- | -- |
| Nickel | 10.7 | * | -- | -- |
| Copper | 5.7 | * | -- | -- |
| Arsenic | 0.9 | * | -- | |
| Low D.O. | 914.0 | 4% | -- | -- |
| Unknown | 445.3 | 2% | -- | -- |
| D.O. Supersaturation | 73.0 | * | 246 | * |
| Chloride | 65.8 | * | -- | -- |
| pH | 43.0 | * | -- | -- |

| | | | | |
|---|---|---|---|---|
| Sediment Deposition | 36.1 | * | -- | -- |
| Thermal Modification | 33.9 | * | -- | -- |
| Sulfate | 20.0 | * | -- | -- |
| Ammonia | 17.7 | * | -- | -- |
| Pesticides | 11.3 | * | 9 | * |
| Nutrients | 4.9 | * | 100,066 | 33% |
| Chlorophyll | -- | -- | 49,757 | 16% |
| Nitrogen | -- | -- | 49,307 | 16% |
| Phosphorus | -- | -- | 854 | * |

*Less than 1 percent

Note: Many stream miles in Missouri are affected by more than one pollution source or pollutant; therefore, total miles/acres in Tables 3 and 4 can exceed miles/acres in Tables 1 and 2.

## CHAPTER 2. MISSOURI AND ITS WATER RESOURCES

Missouri has an area of almost 69,000 square miles and a population of 6.0 million people. Nearly half of the population is concentrated along the border areas on opposite sides of the state in the Kansas City and St. Louis metropolitan areas. Population as well as industrial and commercial activity in major urban areas has remained relatively stable for the past few decades. Patterns of rural land use have changed greatly in some areas, particularly residential development around the larger cities, recreational development adjoining Lake Taneycomo and the eastern ends of Lake of the Ozarks and Table Rock Lake, and the increasing development of large concentrated animal feeding operations in north-central and southwestern Missouri.

Missouri has an extensive stream network that includes more than 22,000 miles of classified streams and more than 291,000 surface acres in its 459 classified lakes. Three distinct regions exist within the state's boundaries and the particular geology and land use of each affect water quality. These areas are a prairie region, which is rolling land predominantly used for row crops and pasture; the Ozarks, a hilly area that is mostly pasture and forest; and the Bootheel, a flat alluvial plain adjoining the Mississippi River in southeast Missouri, which is used mainly for row crop production.

Water Quality Standards

Missouri's Water Quality Standards (10 CSR 20-7.031) provide the names and locations of all classified streams and lakes. This state regulation defines more than 3,700 individual stream and river segments and 450 lakes, lists which beneficial uses are assigned to each of these waters, and defines the level of water quality necessary to meet each of these uses. This is done by setting specific levels of naturally occurring or anthropogenic chemicals, known as numeric criteria, which are not to be exceeded in the water. The department is in the process of revising its water quality standards to include numeric criteria for nutrients (total nitrogen, total phosphorus, and total chlorophyll) in lakes. When that process is complete, the department will also work to develop criteria for nutrients in streams.

The remaining waters of the state, such as those in the headwater areas that do not have permanently flowing or standing water, and a number of small lakes, are not listed in the Missouri Water Quality Standards and do not have beneficial uses assigned to them. These unclassified waters (as well as the classified waters) are protected by the general criteria in the Water Quality Standards. The general criteria say that these waters must be free from conditions harmful to livestock or aquatic life, as well as aesthetic problems such as demolition debris, trash, tires, odor, discoloration, or the presence of objectionable floating or deposited material. The department is currently seeking to promulgate a rule by which the distinction between classified and unclassified waters would effectively be eliminated and all waters of the state would be protected by numeric criteria.

Table 5. Missouri's Water Resources.

| | |
|---|---|
| Missouri Population (2010 census) | 5,988,927 |
| Surface Area (square miles) | 68,742 |
| Number of Four-Digit HUCs* | 12 |
| Number of Eight-Digit HUCs* | 66 |
| Number of Fourteen-Digit HUCs* | 1,500 |
| Classified Stream Miles | 24,431.0 |
| Unclassified Stream Miles | 234,325.1** |
| Number of Classified Lakes | 459 |
| Total Classified Lake Surface Area (acres) | 302,867 |
| Freshwater Wetlands Area (acres) | 113,012*** |

*HUC (Hydrological Unit of Classification): A hierarchical system of watershed delineation, developed by USGS. The system describes scales ranging from major continental basins (two digits) to small local drainages (14 digits).
**From the National Hydrography Dataset, published by the U.S. Geological Survey, 2008.
***From the Land Cover project of the Missouri Resources Assessment Partnership.

## CHAPTER 3. SURFACE WATER ASSESSMENT

### DESCRIPTION OF MISSOURI'S CURRENT WATER QUALITY MONITORING PROGRAM

Purpose

The major purposes of the water quality monitoring program are (1) to characterize background or reference water quality conditions; (2) to better understand daily, flow event and seasonal water quality variations and their underlying processes; (3) to characterize aquatic biological communities and habitats and to distinguish between the impacts of water chemistry and habitat quality; (4) to assess time trends in water quality; (5) to characterize local and regional impacts of point and nonpoint source discharges on water quality; (6) to check for compliance with water quality standards or wastewater permit limits; (7) to aid in developing TMDLs to prescribe acceptable limits of pollutants to be discharged; and (8) to support development of strategies to return impaired waters to compliance with water quality standards. All of these objectives are statewide in scope.

Coordination with Other Monitoring Efforts in Missouri

The department cooperates with other agencies in performing special water quality studies. In 1998, a multi-agency task force including the Missouri Department of Natural Resources, Missouri Department of Conservation (MDC), U.S. Environmental Protection Agency (USEPA), the U.S. Geological Survey (USGS), U.S. Forest Service (USFS), U.S. Department of Agriculture Natural Resources Conservation Service (USDA NRCS), and University of Missouri convened to develop an outline of a statewide aquatic resources monitoring plan, define partnership roles in this monitoring plan and discuss the kind of research needed to further this new monitoring effort. The first major product of this work group was an agreement to initiate a cooperative statewide aquatic invertebrate and fish monitoring program by MDC and the Department of Natural Resources. In 2000, the Missouri Resource Assessment Monitoring (RAM) Program was created. The RAM program is a biological monitoring program that monitors fish and invertebrate communities in wadeable streams throughout the state. It is designed to sample across the entire state every five to six years. MDC has taken the lead, sampling more than 100 sites each year in various Ecological Drainage Units. Since it began, more than 1,300 fish samples and 600 invertebrate samples have been taken.

To maximize efficiency, the department routinely coordinates its monitoring activities to avoid overlap with other agencies and provide and receive interagency input on monitoring study design. Data from other

sources is used for meeting the same objectives as department-sponsored monitoring. The agencies most often involved are USGS, USEPA, MDC, the U.S. Army Corps of Engineers (COE), the USDA Agricultural Research Service (ARS) and the Missouri Department of Health and Senior Services (MDHSS). However, the department also tracks the monitoring efforts of the National Park Service (NPS), USFS, several of the state's larger cities, the states of Arkansas, Kansas, Iowa, and Illinois, and graduate level research conducted at universities within Missouri. The department also uses monitoring data acquired by wastewater dischargers as a condition of discharge permits issued by the department. The department began using data collected by volunteers that have passed Quality Assurance and Quality Control (QA/QC) tests in 1995.

Networks and Programs

1. Fixed Station Network

    A. Objective: To better characterize background or reference water quality conditions, to better understand daily, flow event and seasonal water quality variations and their underlying processes, to assess time trends and to check for compliance with water quality standards.
    B. Design Methodology: Sites are chosen based on one of the following criteria:
        - Site is believed to have water quality representative of many neighboring streams of similar size due to similarity in watershed geology, hydrology and land use, and the absence of any impact from a local point or discrete nonpoint water pollution source.
        - Site is downstream of a significant point source or localized nonpoint source area.
    C. Number of Sites, Sampling Methods, Sampling Frequency, Parameters:
        - USGS/DNR cooperative network: 71 sites statewide, horizontally and vertically integrated grab samples six to 12 times per year, analyzed for nutrients, temperature, pH, dissolved oxygen, percent saturation, specific conductance, flow, *E. coli*, fecal streptococci, and fecal coliform; trace metals, major ions and suspended solids two to twelve times annually at all sites; pesticides six times annually at four sites; and continuous water-quality monitors at two sites on the Missouri River.
        - DNR chemical monitoring of more than 45 sites two to 24 times per year for nutrients, major ions, flow, temperature, pH, dissolved oxygen and specific conductance.
        - UMC/DNR lake monitoring network: about 100 lakes monitored spring through fall for nutrients, chlorophyll, turbidity and suspended solids.
        - DNR routine monitoring of finished public drinking water supplies for bacteria and trace contaminants.
        - Routine bacterial monitoring of swimming beaches at Missouri state parks during the recreational season by the department's Division of State Parks.
        - Routine monitoring of sediment on 10 to 15 discretionary sites annually. All sites are monitored for several heavy metals and organic contaminants. A pore water sample is analyzed for ammonia and a Microtox toxicity test or similar toxicity screening test on the pore water or whole sediment sample is performed.

2. Intensive Surveys

    A. Objective: To characterize the water quality impacts from a specific pollutant source area.
    B. Design Methodology: Determination of contaminants of concern is based on previous water quality studies, effluent sampling, and/or NPDES permit applications. Multiple sampling stations upstream and downstream will be used, if appropriate. If contaminants of concern have significant seasonal or daily variation, season of the year and time of day

must be accounted for in the sampling design. These studies would also require multiple samples per site over a relatively short time frame (e.g., 2 to 4 visits over a 2 to 3 day period or 10 to 15 visits over a 2 to 3 year period).

C. Number of Sites, Sampling Methods, Sampling Frequency, Parameters: The Missouri Department of Natural Resources conducts or contracts for 10 to 15 special studies annually. Each study has multiple sampling sites. Number of sites, sampling frequency and parameters vary greatly depending on the study.

3. Toxics Monitoring Program

Monitoring of toxics is not a separable part of the monitoring program. The fixed station network and many of our intensive studies monitor for toxic chemicals. In addition, major municipal and industrial dischargers must monitor for toxicity in their effluents as a condition of their NPDES permits.

4. Biological Monitoring Program

The Missouri Department of Natural Resources has developed a monitoring program for aquatic invertebrates that is proving very useful for characterizing the health of aquatic biological communities in Missouri. Forty-five reference streams were identified across the state during the 1990s and were used to develop criteria describing reference communities of macroinvertebrates for different ecological regions. More than 50 stream sites are sampled annually, generally chosen to support the formation of the 303(d) list and the creation of TMDLs. Sampling results and data analysis are available from a central database. A long-term objective of the program is to establish a fixed statewide network of biological monitoring stations in order to monitor large-scale trends. Fish sampling must also be a part of an effective long-term biological monitoring program.

The department contracted with the U.S. Geological Survey in 2001 to conduct a study of aquatic invertebrate communities on the Missouri River. The study, *Validation of Aquatic Macroinvertebrate Community Endpoints for Assessment of Biological Condition in the Lower Missouri River*, was published in 2005. The department sees this work as the first of several steps by which it will promote a better understanding of fish and invertebrate communities of large rivers, and ultimately the development of biological criteria for the Missouri and Mississippi rivers.

5. Fish Tissue

A. Objective: Fish tissue monitoring can address two separate objectives. These are (1) the assessment of ecological health or the health of aquatic biota, and (2) the assessment of human health risk based on the level of contamination of fish fillets.

B. Design Methodology: Sites were chosen based on one of the following criteria:
   - Site is believed to have water and sediment quality representative of many neighboring streams of similar size due to similarity in geology, hydrology and land use, and the absence of any known impact from a local point source or discrete nonpoint water pollution source.
   - Site is downstream of a significant point source or localized nonpoint source area.

C. Number of Sites, Sampling Methods, Sampling Frequency, Parameters: The department and USEPA have a cooperative fish tissue monitoring program that collects whole fish composite samples at approximately 13 fixed sites once every two years. The preferred species for these sites are either carp or redhorse sucker. About 25 discretionary sites are also sampled annually for two fish composite samples. One sample is of a top carnivore fish such as largemouth bass, smallmouth bass, walleye or sauger. The other sample is for a species of a lower trophic order such as catfish, carp or sucker. The Missouri Department of Conservation is a partner in this portion of the program. The Department of Natural Resources is now using fish tissue plug techniques to collect the predator

samples, by which a small portion of a live fish may be sampled, composited with others from the same site, and analyzed for mercury. Composite fillet samples are still collected from the lower trophic level fish.

In addition, MDC samples approximately 20 sites annually through its Fish Contaminant Monitoring Program, which began in 1984. Sites are coordinated with the Department of Natural Resources and the Department of Health and Senior Services and a wide variety of species are sampled. Both of these monitoring programs analyze for several chlorinated hydrocarbon insecticides, PCBs, lead, cadmium, mercury, and fat content.

Laboratory Analytical Support

Laboratories Used:

- USGS/DNR Cooperative Fixed Station Network: USGS Lab, Denver, Colorado
- DNR Public Drinking Water Reservoir Network: Missouri Department of Natural Resources Environmental Lab
- Intensive Surveys: varies; many are done by Missouri Department of Natural Resources Environmental Lab
- Toxicity Testing of Effluents: many commercial labs
- Biological Criteria for Aquatic Invertebrates: Missouri Department of Natural Resources Environmental Lab and University of Missouri, Columbia
- Fish Tissue: USEPA Region VII Lab, Kansas City, Kansas and USGS Columbia Environmental Research Center Lab (Missouri Department of Conservation)
- NPDES self-monitoring: commercial labs
- DNR Public Drinking Water Monitoring: Missouri Department of Natural Resources and commercial labs

Quality Assurance/Quality Control (QA/QC) Program

Missouri and Region 7 EPA have completed a Total Quality Management Plan. All environmental data generated directly by the department or through contracts funded by the department or EPA will require a quality assurance project plan (QAPP) following EPA's Guidance for Quality Assurance Project Plans (QA/G-5).

Data Storage and Management

The department retrieves raw data from the USGS database, NWIS, and numerous state, federal and municipal sources. This data is imported into the Missouri state computer system for storage and statistical analysis. The department maintains a good deal of water quality data in its WQA database. Data in this database comes from the department's own monitoring efforts and a wide array of other public and private sources.

Beginning in 1999, the department began linking many separate databases pertaining to water quality, other environmental data and information on regulated facilities via ACCESS software and importing this data into a GIS (ArcView) environment. The majority of the work has been completed, but new data that enters this process is received on a regular basis.

The Missouri Department of Natural Resources has developed a database that provides access to the raw data and analysis of all quantitative invertebrate sampling it has performed. This database is now available to the public online at www.dnr.mo.gov/env/esp/biologicalassessments.htm. Within the next few years, the Missouri Department of Conservation plans to have on-line access to its RAM database, as well as its fisheries and aquatic habitat database that contains community-level data. These databases are updated on an ongoing basis.

Training and Support of Volunteer Monitoring

Two volunteer monitoring programs are now generating water quality data in Missouri. The first is the Lakes of Missouri Volunteer Program (LMVP), a cooperative program between the Department of Natural Resources, the University of Missouri and volunteers who monitor lakes throughout Missouri, including Lake Taneycomo, Table Rock Lake, and several lakes in the Kansas City and St. Louis areas. In 2010, volunteers monitored 113 sites on 55 lakes. Data from this program is used by the university as part of a long-term study on the limnology of Midwestern reservoirs.

The second program involves volunteers who monitor water quality of streams throughout Missouri. The Volunteer Water Quality Monitoring Program is a cooperative project of the Department of Natural Resources, the Department of Conservation, and the Conservation Federation of Missouri and is a subset of the Missouri Stream Team Program. Since its inception in 1993, 8,487 citizens have attended 487 water quality monitoring workshops held by program staff across the state of Missouri. This has resulted in the submission of more than 19,872 separate data sheets at 5,453 Missouri stream sites. The volunteer hours spent in this endeavor total more than 430,004 hours, worth an approximate $8,084,075.20 in added value to the state.

In fiscal year 2011, 190 new Stream Teams formed and in 2012, there were 115 new Stream Teams formed. The total number of Stream Teams has now reached 4,580. In 2011, a total of 215 citizens attended the Introductory class, while 240 attended the same workshop in 2012. After the Introductory workshop, many proceeded to attend at least one workshop for higher level training. In fiscal year 2011, 94 citizens attended the Level 1 workshops and 64 attended to date in fiscal year 2012. The number of attendees for Level 2 workshops in fiscal year 2011 and 2012 were 59 and 38 respectively. One volunteer passed the Level 3 audit in 2009, while 8 volunteers passed in 2010. In 2011 and 2012, the Level 3 and CSI certifications were suspended due to the poor health and untimely death of the staff member in charge of this part of the program. This effort will soon continue with a new staff member in place. Each level of training is a prerequisite for the next higher level, as is appropriate data submission. Levels 2, 3, 4 and CSI represent increasingly higher quality assurance and quality control stringency. Data submitted by volunteers of Level 2 or above may be used by the department to establish baselines of water quality for particular streams, or to point out potential problems that are in need of further investigation. Level 2 and higher volunteer monitors are required to return for a validation workshop at least every three years in order to ensure that their equipment and methods are up to date and that the data they are gathering has a high level of quality assurance. Twenty-six volunteers have received Cooperative Stream Investigation training as of July 2011. In 2011 and 2012 volunteers submitted 592 sets of macro invertebrate data, 1,176 sets of water chemistry data, 487 sets of visual survey data, 559 sets of stream discharge data, and 123 site selection data sheets. Wastewater and drinking water operators have also attend workshops in order to receive operator certification credits. To date, 184 operators have attended Stream Team training.

Data Interpretation and Communication

Missouri now uses the Internet-based WQA database for tracking and reporting water body use attainment information. An EPA contractor, RTI, completed geo-referencing of Missouri's classified waters in 1998. The stream and lake network of the state, water quality standards information, the locations of permitted wastewater discharges and other potential pollutant sources and information describing them can now all be viewed within a GIS (ArcView) environment. The department has developed an Interactive Map View and Query tool for public use that displays a variety of geographic information at www.dnr.mo.gov/internetmapviewer/.

The department has a variety of water quality information available on its Web site, www.dnr.mo.gov. Among other items, this information includes Missouri's Water Quality Standards, the Listing Methodology Document, the 305(b) Report and 303(d) List, TMDLs, and a queryable database of all of the department's electronic water quality data.

Sharing Data with the Public

Water quality data accessibility is easy. Contact the Water Protection Program for more information.

1. The Department's electronic water quality database is available to be searched online at dnr.mo.gov/mocwis_public/wqa/waterbodySearch.do. This includes data on not only water column quality, but sediment, fish tissue, and fish and invertebrate communities. The data has been collected by MDNR and many other agencies or organizations.
2. Requests for very general information on water quality may be made by calling 1-800-361-4827. They may be filled by the 305(b) Report, pamphlets or fact sheets. Much of this information, plus information on Missouri's 303(d) List and completed Total Maximum Daily Load (TMDL) studies, is also available on the Internet at www.dnr.mo.gov/env/wpp/wp-index.html.
3. More specific requests, or requests that are more extensive than can easily be accommodated by the online public database, may require the department to search published reports or water quality data files. If the report or data was generated by the department, it can be sent to the requestor through electronic mail or regular mail (a hard copy for small reports and data files, or compact disks for larger data files). Alternatively, the requestor may visit the department office at 1101 Riverside Dr. in Jefferson City and view the files directly. If the report or data file did not originate with the department, the request may be passed on to the organization that published the report or data.

Requests for more specific water quality information, or requests to view water quality data files, should be sent to:

Missouri Department of Natural Resources
Water Protection Program
ATTN: John Ford
P.O. Box 176
Jefferson City, MO 65102-0176
Phone: (573)751-7024 Fax: (573)522-9920
E-mail: john.ford@dnr.mo.gov

Monitoring Program Evaluation

The water quality monitoring program within the department has traditionally focused on the chemical characterization of water quality in both those streams that are free of, and subject to, point source wastewater discharges. While the monitoring has been able to keep pace with our more critical point source assessment needs and has done a good job of characterizing regional water quality unimpaired by point source discharges, the size and scope of the department's monitoring has fallen far short of the state's information needs. The advent of large concentrated animal feeding operations (CAFOs) in Missouri, concern over eutrophication of our large recreational lakes, and continuing urban sprawl, among other problems, have produced questions our present monitoring program is incapable of answering. This inadequacy is demonstrated, in part, by the fact that only 34 percent of Missouri's classified stream miles are considered to be monitored, while 59 percent are completely unassessed.

A water quality monitoring strategy for Missouri was completed in 2005 and was updated in 2007. This proposal provides an overview of the current monitoring program and identifies additional needs. Among the major monitoring needs identified by this strategy are biological monitoring for great rivers, large rivers, and large reservoirs, chemical and biological monitoring for wetlands, and increased surveys of unclassified streams. The program is also in the process of expanding its use of new monitoring technologies, such as continuous data sondes, and efficiencies in monitoring, such as using biological monitoring to characterize the health of a water body.

**ASSESSMENT METHODOLOGY**

This section describes the procedures used by the Missouri Department of Natural Resources to rate the quality of Missouri's waters.

Water quality is judged by its conformance with Missouri's Water Quality Standards. These standards were first implemented for all Missouri streams and a few large lakes in 1970 and are revised at least once every three years. These standards now list more than 24,000 miles of classified streams and 459 classified (significant, mostly public) lakes representing 302,867 surface acres of water, along with the uses for which these waters are protected. These standards also list the maximum allowable concentrations of chemicals and bacteria in these waters.

The table below lists the various uses of Missouri's waters and the portions of state waters that are protected for each use.

Table 6. Missouri Waters Protected For Various Uses.

| Designated Use | Stream Miles | % of Total | Lake Acres | % of Total |
|---|---|---|---|---|
| Protection of Aquatic Life and Fish Consumption | 24,431.0 | 100 | 302,867 | 100 |
| Subset: Warm-Water Fishery | 20,875.7 | 85 | 291,635 | 96 |
| Cool-Water Fishery* | 3,257.1 | 13 | 0 | 0 |
| Cold-Water Fishery** | 298.2 | 1 | 11,232 | 4 |
| Livestock and Wildlife Watering | 24,431.0 | 100 | 302,867 | 100 |
| Whole Body Contact Recreation | 23,998.7 | 98 | 302,867 | 100 |
| Secondary Contact Recreation | 8,872.9 | 36 | 256,601 | 85 |
| Drinking Water Supply | 3,410.5 | 14 | 133,692 | 44 |
| Industrial | 1,589.7 | 7 | 6,959 | 2 |
| Antidegradation: | | | | |
| Outstanding National Resource Waters | 171.2 | | | |
| Outstanding State Resource Waters | 203.5*** | | | |
| Total Classified Waters in Missouri | 24,431.0 | | 302,867 | |

*smallmouth bass, rock bass
**trout
***Outstanding State Resource Waters also include 270 acres of marsh wetlands in three locations.

Classified streams of Missouri are all permanently flowing streams or streams with permanent pools. All classified waters of the state, including significant public lakes, are classified for protection of aquatic life, livestock and wildlife watering, and fish consumption by humans. The Water Quality Standards for these uses set the maximum allowable concentrations for 117 chemicals in these waters. A subset of these waters classified for drinking water supply and groundwater has maximum allowable concentrations for an additional 79 chemicals in the standards. Waters protected for whole body contact recreation such as swimming or water skiing also have a maximum allowable bacteria standard.

Missouri's Water Quality Standards also contain narrative criteria. These standards are not numbers but general statements about the expectations for waters of the state. These standards require waters to be free of objectionable odors, color, turbidity, trash, floating materials or bottom deposits, and of conditions harmful to aquatic life, such as high water temperature, low dissolved oxygen or chemical toxicity. Importantly, these standards apply not just to the classified waters, but to all waters of the state, including the small intermittent streams that only carry water during and shortly after rainfall or snow melt.

The Methodology for the Development of the 2012 Section 303(d) List in Missouri, commonly referred to as Missouri's 2012 Listing Methodology Document, or LMD, describes in detail both what data may be used for assessment and what assessment methods are to be used in interpreting Missouri's Water Quality

Standards to arrive at both the 2012 303(d) list and this 2012 305 (b) report. This document goes through a process of stakeholder input and review and is revised during every biennial listing cycle. Missouri's proposed 2012 303(d) list is presented as Table 14 in Appendix 1 of this report. Table 15 contains those waters which were also found to be impaired, but which already have measures in place to correct the impairment, such as a Total Maximum Daily Load (TMDL), or otherwise do not qualify for the 303(d) list. Table 16 lists those waters for which an impairment is suspected, but sufficient data does not currently exist to make an official assessment.

Table 7. Summary of Monitored and Evaluated Waters.

| Degree of Use Support | Evaluated Stream Miles | Monitored Stream Miles | Total Stream Miles Assessed | Evaluated Lake Acres | Monitored Lake Acres | Total Lake Acres Assessed |
|---|---|---|---|---|---|---|
| Fully Supporting All Assessed Uses | 1,000.3 | 3,512.2 | **4,512.5** | 905 | 125,556 | **126,461** |
| Impaired For One or More Uses | 689.0 | 4,754.3 | **5,443.3** | 27 | 69,712 | **69,739** |
| TOTAL ASSESSED | **1,689.3** | **8,266.5** | **9,955.8** | **932** | **195,268** | **106,667** |
| TOTAL UNASSESSED | | | **14,475.2** | | | **196,200** |

**Monitored waters** are those waters for which sufficient water quality data for an assessment has been collected in the past five years. Approximately 34 percent of all classified stream miles and 64 percent of all classified lake acres are considered to be monitored.

**Evaluated waters** are those waters which have not been adequately monitored in the past five years. Either older data is available that is still considered representative of present conditions, or they have geology and land use similar to nearby monitored waters and their water quality assessment is assumed to be the same as those nearby monitored waters. Seven percent of all classified stream miles and less than one percent of all classified lake acres are considered to be evaluated.

**Unassessed waters** are those waters that are not monitored directly and do not have nearby monitored waters with similar geology and land use. Thus, these represent the classified waters in the state for which we are unable to make an accurate assessment of their compliance with water quality standards and Clean Water Act goals. Fifty-nine percent of classified stream miles fall into this category. Sixty-five percent of classified lake acres are considered to be unassessed.

## ADDITIONAL INFORMATION ON MISSOURI LAKES

Summary Statistics

Information on beneficial use attainment in classified lakes is given in Tables 1 and 2. The acreages of classified lakes not fully supporting beneficial uses by major source category are as follows:

| | |
|---|---|
| Nonpoint Sources | 49,901 acres |
| Point Sources | 48,434 acres |
| Atmospheric Deposition | 24,560 acres |
| Hydromodification | 246 acres |

Background

Missouri's definition of significant lakes corresponds to the Department of Natural Resources list of classified lakes and includes lakes that fall into one of the following three categories: (1) small public drinking water reservoirs; (2) large multi-purpose reservoirs; and (3) reservoirs or lakes with important recreational values.

It should be noted that Missouri has only a few naturally occurring lakes, these being primarily depressions or old oxbows on the Missouri or Mississippi River floodplain. Most classified lakes in the state are man-made reservoirs. In addition, high acidity is not a problem in Missouri lakes due to the high amounts of calcium carbonate found in the geology.

Trophic Status

Eutrophication is a natural process that occurs in lakes involving the gradual filling of the lake over time accompanied by increasing aquatic plant growth. This concept also encompasses the enrichment of lakes and reservoirs by addition of nitrogen and phosphorus from human activity. This additional nutrient load causes increased aquatic plant growth, predominantly of phytoplankton, which causes lake water to be greener and more turbid.

The trophic state of a lake typically refers to the total nitrogen or phosphorus concentration in the lake or the amount of algae or other aquatic plants present in the lake. Oligotrophic lakes are clear with few nutrients and very little aquatic plant growth. Mesotrophic, eutrophic and hypereutrophic are terms referring to lakes with correspondingly higher levels of nutrients and aquatic plant growth. Trophic state is an important way to characterize lakes because it relates directly to such factors as lake clarity, which is greater in oligotrophic and mesotrophic lakes, and fish production, which tends to be greater in eutrophic lakes.

The method presently used by the state to determine trophic status was derived from the work by Wetzel, R.G., 1975; "Limnology", Table 14-11; and from Vollenweider, R.A. and J.J. Kerekes, 1980; EPA440/5-81-010; "Restoration of Lakes and Inland Waters". The criteria are shown in the table below.

Table 8. Definition of Trophic Classification.

| Trophic Class | Chlorophyll-A (µg/L) | Total Phosphorus (µg/L) |
|---|---|---|
| Oligotrophic | <3 | <10 |
| Mesotrophic | 3-10 | 10-30 |
| Eutrophic | 11-56 | 31-100 |
| Hypereutrophic | >56 | >100 |

Summary results of studies conducted by the University of Missouri between 1989 and 2011 on trophic status of Missouri lakes follow.

Table 9. Trophic Status of Selected Missouri Lakes and Reservoirs.

| LAKE | COUNTY | LOCATION | YEARS OF RECORD | SECCHI[1] | TP[2] | TN[3] | CHL-A[4] | TROPHIC STATE[5] |
|---|---|---|---|---|---|---|---|---|
| GLACIAL PLAINS | | | | | | | | |
| *Allaman Lake | Clinton | 24, 56 N, 30W | 8 | 1.2 | 40 | 645 | 15 | E |
| Baring C.C. Lake | Knox | 26, 63N, 12W | 9 | 1.3 | 28 | 938 | 20 | E |
| Bean Lake | Platte | 12/14, 54N, 37W | 1 | 0.1 | 264 | 1,658 | 144 | HE |
| Belcher Branch L. | Buchanan | 8/17, 55N, 34W | 6 | 1.1 | 35 | 565 | 12 | E |
| Bethany Lake #2 | Harrison | 27, 64N, 28W | 11 | 1.3 | 33 | 713 | 11 | E |
| Big Lake | Holt | 18/19, 61N, 39W | 1 | 0.2 | 328 | 2,508 | 166 | HE |
| Bilby Ranch Lake | Nodaway | 13/24, 64N, 38W | 12 | 1.0 | 51 | 922 | 35 | E |
| Blind Pony Lake | Saline | SE18, 49N, 22W | 16 | 0.6 | 96 | 1,319 | 40 | E |
| Bowling Green L. | Pike | 29, 53N, 2W | 22 | 1.9 | 24 | 516 | 8 | M |
| Breckenridge City Reservoir | Caldwell | 3, 57N, 26W | 2 | 0.9 | 63 | 866 | 8 | E |
| Brookfield Lake | Linn | 33, 58N, 19W | 20 | 1.2 | 23 | 633 | 8 | M |
| Bucklin Lake | Linn | 11, 57N, 18W | 2 | 0.5 | 135 | 1,994 | 16 | E |
| *Busch W.A. #16 | St. Charles | 35/36, 46N, 2E | 1 | 1.8 | 26 | 594 | 14 | E |
| *Busch W.A. #37 | St. Charles | 27, 46N, 2E | 3 | 1.2 | 28 | 485 | 7 | M |
| Cameron Lake #3 | DeKalb | 9, 57N, 30W | 2 | 0.4 | 138 | 1,196 | 23 | E |
| Cameron Lake #4 (Grindstone) | DeKalb | 5, 57N, 30W | 1 | 0.4 | 196 | 1,753 | 22 | HE |
| Charity Lake | Atchison | 32, 66N, 41W | 3 | 1.5 | 39 | 615 | 17 | E |
| Clarence Lake #2 | Shelby | 15/16, 57N, 12W | 1 | 0.7 | 52 | 904 | 27 | E |
| Lake Contrary | Buchanan | 26, 57N, 36W | 6 | 0.3 | 365 | 3,060 | 194 | HE |
| Crystal Lake | Ray | 32, 53N, 29W | 2 | 0.6 | 82 | 918 | 34 | E |
| *Daniel Boone L. | Shelby | 31/32, 58N 12W | 2 | 0.2 | 187 | 1,424 | 38 | HE |
| *Dean Lake | Chariton | 3, 54N, 21W | 1 | 0.1 | 382 | 2,110 | 5 | HE |
| Deer Ridge Community Lake | Lewis | 18, 62N, 8W | 22 | 1.1 | 45 | 788 | 18 | E |
| Edina Lake | Knox | 12, 62N, 12W | 11 | 0.7 | 72 | 1,291 | 29 | E |
| Edwin A. Pape L. | Lafayette | 20, 48N, 24W | 12 | 0.6 | 83 | 1,078 | 30 | E |
| Ella Ewing Lake | Lewis | 21, 64N, 10W | 9 | 0.6 | 90 | 1,376 | 34 | E |
| Elmwood City L. | Sullivan | 35, 63N, 20W | 11 | 0.8 | 61 | 791 | 19 | E |
| Forest Lake | Adair | 14, 62N, 16W | 22 | 1.3 | 25 | 418 | 6 | M |
| Fox Valley Lake | Clark | 27, 66N, 8W | 11 | 1.9 | 25 | 656 | 12 | M |
| Green City Lake | Sullivan | NE16, 63N, 18W | 8 | 0.6 | 82 | 1,068 | 28 | E |
| Hamilton Lake | Caldwell | 15, 57N, 28W | 11 | 0.8 | 61 | 968 | 14 | E |
| *Happy Holler L. | Andrew | 8/17, 60N, 34W | 3 | 0.9 | 70 | 1,049 | 53 | E |
| Harrison Co. Lake | Harrison | 17/30, 65N, 28W | 12 | 0.7 | 68 | 1,063 | 39 | E |
| Hazel Creek Lake | Adair | 31, 64N, 15W | 14 | 1.3 | 29 | 608 | 9 | M |
| Henry Sever Lake | Knox | 14, 60N, 10W | 22 | 0.8 | 55 | 1,059 | 18 | E |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Higginsville Lake | Lafayette | 9, 49N, 25W | 22 | 0.6 | 99 | 1,278 | 27 | E |
| Hunnewell Lake | Shelby | 25, 57N, 9W | 22 | 1.0 | 44 | 801 | 20 | E |
| *Indian Creek Lake | Livingston | 15/27, 59N, 25W | 5 | 1.7 | 23 | 630 | 12 | M |
| Jamesport City L. | Daviess | 22, 60N, 26W | 2 | 0.9 | 114 | 993 | 28 | E |
| Jamesport Community Lake | Daviess | 20, 60N, 26W | 4 | 0.4 | 137 | 1,942 | 120 | HE |
| *Jo Shelby Lake | Linn | 36, 57N, 22W | 4 | 0.9 | 70 | 1,101 | 40 | E |
| King City New Reservoir | Gentry | E28, 61N, 32W | 3 | 0.7 | 74 | 989 | 22 | E |
| King City Old Reservoir | Gentry | NW28, 61N, 32W | 1 | 0.3 | 212 | 1,445 | 86 | HE |
| King Lake | DeKalb | 12/13, 60N, 32W | 7 | 0.2 | 213 | 1,794 | 21 | HE |
| Kraut Run Lake (Busch W.A. #33) | St. Charles | 23, 46N, 2E | 22 | 0.5 | 99 | 1,117 | 63 | HE |
| La Belle Lake #2 | Lewis | NE 16, 61N, 9W | 7 | 0.8 | 69 | 1,462 | 46 | E |
| Lancaster City L. | Schuyler | 23, 66N, 15W | 6 | 0.7 | 72 | 927 | 32 | E |
| La Plata L. (New) | Macon | 14, 60 N, 14W | 5 | 1.2 | 31 | 835 | 15 | E |
| Lawson City Lake | Ray | 31, 54N, 29W | 3 | 0.8 | 36 | 958 | 29 | E |
| Limpp Lake | Gentry | 29, 62N, 32W | 3 | 0.4 | 117 | 1,681 | 80 | E |
| Lincoln Lake | Lincoln | 8, 49N, 1E | 21 | 2.3 | 17 | 431 | 5 | M |
| Linneus Lake | Linn | 36, 59N, 21W | 2 | 0.6 | 84 | 943 | 25 | E |
| Little Dixie Lake | Callaway | 26, 48N, 11W | 23 | 0.6 | 65 | 850 | 24 | E |
| Long Branch Lake | Macon | 18, 57N, 14W | 23 | 0.7 | 53 | 890 | 16 | E |
| Macon Lake | Macon | 17, 57N, 14W | 13 | 0.8 | 52 | 890 | 29 | E |
| Maple Leaf Lake | Lafayette | 4, 48N, 26W | 8 | 1.1 | 40 | 832 | 21 | E |
| Marceline City L. | Chariton | 14, 56N, 19W | 14 | 0.8 | 110 | 1,166 | 43 | E |
| Marceline Res. | Linn | 28, 57N, 18W | 3 | 0.7 | 133 | 1,438 | 41 | E |
| Lake Marie | Mercer | 36, 66N, 24W | 10 | 2.7 | 15 | 445 | 4 | M |
| Mark Twain Lake | Ralls | 26, 55N, 7W | 23 | 1.0 | 71 | 1,367 | 17 | E |
| Maysville L. (N) | DeKalb | 33, 59N, 31W | 11 | 0.6 | 194 | 1,331 | 47 | HE |
| Maysville L. (SE) | DeKalb | 3, 58N, 31W | 1 | 0.9 | 68 | 853 | 26 | E |
| Memphis Reservoir | Scotland | 14, 65N, 12W | 12 | 0.6 | 79 | 1,244 | 47 | E |
| Milan Lake South | Sullivan | 2/12, 62N, 20W | 12 | 1.0 | 45 | 688 | 13 | E |
| Monroe City L. B | Monroe | 30, 56N, 7W | 11 | 0.5 | 86 | 1,143 | 35 | E |
| Monroe City L. Rte. J | Ralls | 27/34, 56N, 7W | 2 | 0.6 | 119 | 1,338 | 27 | E |
| Mozingo Lake | Nodaway | 19, 65N, 34W | 12 | 1.4 | 31 | 825 | 20 | E |
| Nehai Tonkayea L. | Chariton | 11, 55N, 18W | 10 | 1.8 | 18 | 418 | 3 | M |
| Nodaway Lake | Nodaway | 20, 65N, 35W | 12 | 0.8 | 44 | 1,014 | 24 | E |
| Old Bethany City Reservoir | Harrison | 2, 63N, 28W | 1 | 1.3 | 34 | 576 | 7 | M |
| †Old Kings Lake | Lincoln | NW Surv. 1817 | 1 | 0.3 | 278 | 1,573 | 80 | HE |
| Lake Paho | Mercer | 25, 65N, 25W | 11 | 0.8 | 48 | 841 | 14 | E |
| *Philips Lake | Boone | 32, 58N, 12W | 4 | 1.0 | 41 | 711 | 18 | E |
| Pike Lake | Livingston | 2, 59N, 25W | 2 | 1.4 | 29 | 647 | 12 | E |
| Pony Express Lake | DeKalb | 33, 58N, 31W | 12 | 0.8 | 67 | 1,057 | 32 | E |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Prairie Lake | St. Charles | Surv. 1790 | 1 | 0.7 | 98 | 790 | 12 | E |
| *Prairie Slough | Lincoln | 2/12, 51N, 2E | 1 | 0.2 | 231 | 2,495 | 72 | HE |
| Ray County Lake | Ray | 13, 52N, 28W | 3 | 0.4 | 158 | 1,969 | 134 | HE |
| Rocky Fork Lake | Boone | 31, 50N, 12W | 8 | 1.9 | 23 | 546 | 7 | M |
| Rocky Hollow L. | Clay | 33, 53N, 30W | 10 | 1.2 | 67 | 842 | 31 | E |
| Rothwell Lake | Randolph | NE/SE3, 53N, 14W | 3 | 1.2 | 52 | 858 | 30 | E |
| Lake St. Louis | St. Charles | Surv. 54 | 9 | 0.5 | 86 | 1,171 | 29 | E |
| Lake Ste. Louise | St. Charles | NW Surv. 929 | 3 | 1.1 | 31 | 513 | 6 | M |
| *Santa Fe Lake | Macon | 5, 60N, 14W | 3 | 1.1 | 49 | 1,021 | 40 | E |
| Savannah Lake | Andrew | 7, 59N, 35W | 3 | 1.2 | 41 | 880 | 19 | E |
| Sears Comm. Lake | Sullivan | 18, 63N, 19W | 1 | 0.4 | 66 | 790 | 14 | E |
| Shelbina Lake | Shelby | 20, 57N, 10W | 11 | 0.6 | 97 | 1,054 | 37 | E |
| Shelbyville Lake | Shelby | 19/20, 58N, 10W | 1 | 0.4 | 160 | 1,587 | 93 | HE |
| Lake Showme | Scotland | 15, 65N, 12W | 3 | 1.2 | 40 | 949 | 27 | E |
| Smithville Lake | Clay | 13, 53N, 33W | 22 | 1.0 | 33 | 851 | 17 | E |
| Spring Lake | Adair | 10/11, 61N, 16W | 9 | 1.2 | 35 | 533 | 9 | E |
| Sterling Price Lake | Chariton | 17, 53N, 33W | 10 | 0.6 | 105 | 1,466 | 78 | HE |
| Sugar Creek Lake | Randolph | 16, 54N, 14W | 10 | 0.8 | 55 | 757 | 26 | E |
| Sugar Lake | Buchanan | 27, 55N, 37W | 6 | 6 | 0.2 | 333 | 2,524 | HE |
| *Swan Pond | Lincoln | Surv. 1732 | 1 | 0.3 | 345 | 1,658 | 126 | HE |
| Thomas Hill Res. | Randolph | 24, 55N, 16W | 13 | 0.7 | 53 | 773 | 14 | E |
| Thunderhead Lake | Putnam | 15, 66N, 19W | 12 | 0.8 | 50 | 971 | 17 | E |
| Tobacco Hills Lake | Platte | 11, 53N, 35W | 2 | 2.3 | 22 | 511 | 7 | M |
| Unionville Res. | Putnam | 27, 66N, 19W | 13 | 0.6 | 95 | 1,207 | 39 | E |
| Vandalia Lake | Pike | 12, 53N, 5W | 13 | 1.0 | 73 | 1,024 | 37 | E |
| Lake Viking | Daviess | 9, 59N, 28W | 22 | 1.4 | 27 | 515 | 9 | M |
| Wakonda Lake | Lewis | 13/14, 60N, 6W | 6 | 0.8 | 95 | 1,186 | 51 | E |
| Watkins Mill Lake | Clay | 22, 53N, 30W | 22 | 0.9 | 40 | 640 | 18 | E |
| Waukomis Lake | Platte | 17, 51N, 33W | 10 | 1.7 | 25 | 593 | 14 | E |
| Weatherby Lake | Platte | 15, 51N, 34W | 3 | 2.0 | 20 | 403 | 5 | M |
| Whiteside Lake | Lincoln | S Surv. 1686 | 3 | 2.4 | 20 | 627 | 6.4 | M |
| Willow Brook L. | DeKalb | 4, 58N, 31W | 5 | 0.7 | 82 | 1,161 | 50 | E |
| Worth County L. | Worth | 29/32, 65N, 32W | 3 | 0.6 | 74 | 1,413 | 50.7 | E |
| OSAGE PLAINS | | | | | | | | |
| Adrian Reservoir | Bates | 3, 41N, 31W | 1 | 0.5 | 57 | 795 | 29 | E |
| Amarugia Highlands Lake | Cass | 10, 43N, 32W | 9 | 1.0 | 51 | 657 | 12 | E |
| Atkinson Lake | St. Clair | 6, 37N, 28W | 21 | 0.5 | 75 | 1,032 | 39 | E |
| Blue Springs Lake | Jackson | 3, 48N, 31W | 6 | 1.0 | 36 | 557 | 18 | E |
| Bushwhacker Lake | Vernon | 27, 34N, 32W | 5 | 1.4 | 30 | 622 | 16 | E |
| Butler Lake | Bates | 14, 40N, 32W | 5 | 0.7 | 67 | 941 | 33 | E |
| Cat Claw Lake | Jackson | NW14, 47N, 31W | 4 | 0.4 | 114 | 1,072 | 28 | E |
| Coot Lake | Jackson | SW22, 47N, 31W | 4 | 0.6 | 59 | 1,105 | 32 | E |
| Cottontail Lake | Jackson | NSW14, 47N, 31W | 4 | 0.5 | 104 | 941 | 21 | E |
| Drexel City Reservoir South | Bates | 7, 42N, 33W | 1 | 0.9 | 51 | 1,062 | 23 | E |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Drexel Lake | Bates | 6, 42N, 33W | 1 | 0.7 | 80 | 1,341 | 12 | E |
| *Four Rivers CA L. | Vernon | 4, 37N, 31W | 1 | 1.0 | 34 | 460 | 7 | M |
| Garden City Lake | Cass | 31, 44N, 29W | 1 | 0.5 | 77 | 997 | 38 | E |
| *Gopher Lake | Jackson | NW23, 47N, 31W | 4 | 0.4 | 110 | 1,034 | 39 | E |
| Harmony Mission Lake | Bates | 15, 38N, 32W | 9 | 1.1 | 51 | 840 | 24 | E |
| Harrisonville City Lake | Cass | 26, 46N, 31W | 9 | 0.8 | 52 | 951 | 19 | E |
| Hazel Hill Lake | Johnson | 28, 47N, 26W | 11 | 0.7 | 53 | 1,060 | 36 | E |
| Holden City Lake | Johnson | 29, 46N, 28W | 8 | 0.7 | 46 | 899 | 15 | E |
| Jackrabbit Lake | Jackson | SENE15, 47N, 31W | 4 | 0.6 | 117 | 768 | 14 | E |
| Lake Jacomo | Jackson | 11, 48N, 31W | 9 | 1.3 | 34 | 574 | 19 | E |
| Lamar Lake | Barton | 32, 32N, 30W | 12 | 0.8 | 83 | 1,017 | 49 | E |
| Lone Jack Lake | Jackson | 11/14, 47N, 30W | 3 | 1.7 | 28 | 646 | 17 | E |
| Longview Lake | Jackson | 20, 47N, 32W | 9 | 0.8 | 36 | 746 | 12 | E |
| Lotawana Lake | Jackson | 29, 48N, 30W | 9 | 1.4 | 33 | 680 | 19 | E |
| Montrose Lake | Henry | 33, 41N, 27W | 11 | 0.3 | 190 | 1,268 | 62 | HE |
| Nell Lake | Jackson | 15/22, 47N, 31W | 4 | 0.5 | 94 | 1,200 | 44 | E |
| North Lake | Cass | 28, 45N, 31W | 22 | 0.7 | 102 | 1,026 | 45 | E |
| Odessa Lake | Lafayette | 15, 48N, 28W | 3 | 1.4 | 39 | 853 | 22 | E |
| Prairie Lee Lake | Jackson | 27, 48N, 31W | 9 | 0.8 | 56 | 903 | 26 | E |
| Raintree Lake | Cass | 6, 46N, 31W | 22 | 0.7 | 55 | 85 | 14 | E |
| Spring Fork Lake | Pettis | 21, 44N, 21W | 12 | 0.6 | 159 | 1,141 | 48 | E |
| Lake Tapawingo | Jackson | 34, 49N, 31W | 8 | 1.2 | 36 | 788 | 32 | E |
| *Tebo Lake | Pettis | 7/12, 44N, 22W | 6 | 2.8 | 18 | 609 | 4 | M |
| Winnebago Lake | Cass | 9, 46N, 31W | 10 | 0.9 | 50 | 842 | 20 | E |
| <u>OZARK BORDER</u> | | | | | | | | |
| *Ashland Lake | Boone | 19, 46N, 11W | 1 | 0.6 | 119 | 1,684 | -- | HE |
| Beaver Lake | Butler | 22, 25N, 4E | 1 | 1.4 | 19 | 370 | 5 | M |
| *Bella Vista Lake | Cape Girardeau | 2/11, 32N, 13E | 8 | 1.5 | 23 | 524 | 10 | M |
| *Bennitt Lake | Howard | 2, 51N, 14W | 2 | 1.2 | 26 | 611 | 12 | E |
| Binder Lake | Cole | 36, 45N, 13W | 18 | 1.0 | 56 | 782 | 26 | E |
| *Boutin Lake | Cape Girardeau | 15, 32N, 14E | 8 | 1.6 | 25 | 622 | 11 | M |
| Creve Coeur Lake | St. Louis | 20, 46N, 5E | 8 | 0.3 | 152 | 1,064 | 58 | HE |
| *Dairy Farm L. #1 | Boone | 34, 49N, 14W | 4 | 0.4 | 223 | 2,342 | 90 | HE |
| *Dairy Farm L. #3 | Boone | 35, 49N, 14W | 4 | 0.5 | 484 | 1,866 | 70 | HE |
| *D.C. Rogers Lake | Howard | 3, 50N, 16W | 11 | 1.2 | 33 | 542 | 9 | M |
| *Eureka Lake | St. Louis | NE31, 44N, 4E | 1 | 0.8 | 48 | 830 | 14 | E |
| Fayette Lake #2 | Howard | 4, 50N, 16W | 9 | 0.9 | 52 | 833 | 24 | E |
| Lake Forest | Ste. Genevieve | 36, 38N, 7E | 10 | 1.3 | 43 | 649 | 22 | E |
| Lake Girardeau | Cape Girardeau | 9, 30N, 11E | 8 | 0.9 | 62 | 896 | 42 | E |
| Glover Spring Lake | Callaway | 13, 47N, 9W | 7 | 1.2 | 67 | 863 | 22 | E |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Goose Creek Lake | St. Francois | 26,38N, 6E | 11 | 2.3 | 14 | 388 | 4 | M |
| Higbee Lake | Randolph | 9, 52N, 14W | 2 | 1.1 | 31 | 640 | 9 | M |
| Jennings Lake | St. Louis | 8, 46N, 7E | 1 | 0.7 | 78 | 682 | 18 | E |
| Manito Lake | Moniteau | 8/9, 44N, 17W | 11 | 0.6 | 103 | 1,028 | 19 | E |
| Lake Northwoods | Gasconade | 33, 43N, 5W | 12 | 1.2 | 24 | 448 | 5 | M |
| | | | | | | | | |
| Perry County | | | | | | | | |
| Community Lake | Perry | 22, 35N, 10E | 9 | 0.8 | 87 | 1,035 | 46 | E |
| Lake Pinewoods | Carter | 7, 26N, 3E | 7 | 1.5 | 31 | 661 | 15 | E |
| Pinnacle Lake | Montgomery | 24, 47N, 5W | 6 | 2.7 | 22 | 454 | 5 | M |
| Prairie Home CA | | | | | | | | |
| Lake #2 | Cooper | 6, 46N, 15W | 2 | 0.9 | 32 | 680 | 9 | M |
| Simpson Park Lake | St. Louis | 16, 44, 5E | 1 | 0.7 | 111 | 987 | 32 | HE |
| | | | | | | | | |
| Timberline Lake | St. Francois | 23, 38N, 4E | 11 | 4.2 | 9 | 294 | 2 | O |
| Lake Tishomingo | Jefferson | 5, 41N, 4E | 11 | 1.9 | 22 | 490 | 6 | M |
| *Tri-City | | | | | | | | |
| Community Lake | Boone | 24, 51N, 12W | 10 | 0.8 | 57 | 865 | 20 | E |
| Tywappity Lake | Scott | 8, 29N, 13E | 8 | 0.8 | 56 | 1,079 | 44 | E |
| Wanda Lee Lake | Ste. Genevieve | 2, 37N, 7E | 10 | 1.3 | 56 | 577 | 26 | E |
| | | | | | | | | |
| Lake Wappapello | Wayne | 3, 26N, 3E | 22 | 0.9 | 37 | 521 | 25 | E |
| Lake Wauwanoka | Jefferson | 1, 40N, 4E | 12 | 3.1 | 13 | 557 | 3 | O |
| *Wellsville Lake | Montgomery | 9/10, 49N, 6W | 2 | 4.5 | 8 | 347 | 1 | O |

<u>OZARK HIGHLANDS</u>

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Austin Lake | Texas | 30, 29N, 11W | 10 | 1.6 | 22 | 545 | 8 | M |
| Ben Branch Lake | Osage | 14/15, 44N, 8W | 4 | 1.8 | 21 | 670 | 16 | M |
| *Bismarck Lake | St. Francois | 19, 35N, 4E | 11 | 1.4 | 33 | 471 | 16 | M |
| Brays Lake | Phelps | 26/35, 37N, 8W | 1 | 2.2 | 14 | 388 | 4 | M |
| Bull Shoals Lake | Taney | 13, 21N, 17W | 8 | 2.2 | 18 | 360 | 8 | M |
| | | | | | | | | |
| *Lake Capri | St. Francois | 30, 37N, 4E | 22 | 4.7 | 6 | 291 | 2 | O |
| *Lake Carmel | St. Francois | 18, 37N, 4E | 12 | 2.8 | 10 | 311 | 3 | O |
| Clearwater Lake | Reynolds | 6, 28N, 3E | 22 | 1.9 | 14 | 218 | 6 | M |
| Council Bluff Lake | Iron | 23, 35N, 1E | 22 | 3.3 | 7 | 221 | 2 | O |
| Crane Lake | Iron | 33, 32N, 4E | 9 | 1.3 | 14 | 239 | 4 | M |
| | | | | | | | | |
| Fellows Lake | Greene | 22, 30N, 21W | 22 | 2.7 | 13 | 347 | 5 | M |
| Fourche Lake | Ripley | 22, 23N, 1W | 11 | 3.4 | 9 | 245 | 3 | O |
| Fredericktown | | | | | | | | |
| City Lake | Madison | 6, 33N, 7E | 10 | 0.7 | 66 | 753 | 33 | E |
| Harry S. Truman L. | Benton | 7, 40N, 23W | 22 | 1.2 | 44 | 832 | 17 | E |
| Indian Hills Lake | Crawford | 23, 39N, 5W | 12 | 1.0 | 36 | 640 | 18 | E |
| | | | | | | | | |
| Lake Killarney | Iron | 1, 33N, 4E | 8 | 0.8 | 62 | 613 | 28 | E |
| *Lafitte Lake | St. Francois | 28, 37N, 4E | 2 | 4.2 | 6 | 321 | 2 | O |
| *Little Prairie Lake | Phelps | 21, 38N, 7W | 22 | 1.2 | 27 | 476 | 9 | M |
| Loggers Lake | Dent | 10, 31N, 3W | 8 | 3.1 | 10 | 224 | 4 | M |
| Lower Taum | | | | | | | | |
| Sauk Lake | Reynolds | 33, 33N, 2E | 9 | 2.1 | 12 | 196 | 34 | M |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Mac Lake (Ziske) | Dent | NE17, 34N, 5W | 8 | 1.7 | 23 | 566 | 19 | E |
| *Lake Marseilles | St. Francois | 29, 37N, 4E | 11 | 3.6 | 10 | 350 | 2 | O |
| McCormick Lake | Oregon | 8/9, 25N, 4W | 3 | 3.3 | 5 | 109 | 1 | O |
| McDaniel Lake | Greene | 26, 30N, 22W | 21 | 1.3 | 32 | 463 | 17 | E |
| *Miller Lake | Carter | 1, 27N, 1E | 10 | 1.5 | 20 | 493 | 7 | M |
| | | | | | | | | |
| Monsanto Lake | St. Francois | 20, 36N, 5E | 10 | 2.2 | 10 | 378 | 2 | O |
| Lake Niangua | Camden | 19, 37N, 17W | 1 | 0.5 | 52 | 668 | 5 | M |
| Nims Lake | Madison | 24, 34N, 6E | 1 | 1.5 | 17 | 339 | 6 | M |
| Noblett Lake | Douglas | 25, 26N, 11W | 8 | 2.6 | 16 | 231 | 4 | M |
| Norfork Lake | Ozark | 14, 21N, 12W | 6 | 1.7 | 23 | 631 | 6 | M |
| | | | | | | | | |
| Lake of the Ozarks | Miller | 19, 40N, 15W | 19 | 1.9 | 31 | 607 | 16 | E |
| Palmer Lake | Washington | 22, 36N, 1E | 1 | 2.1 | 8 | 199 | 2 | O |
| Peaceful Valley L. | Gasconade | 25, 42N, 6W | 12 | 1.3 | 37 | 842 | 29 | E |
| Pomme de Terre L. | Hickory | 2, 36N, 22W | 23 | 1.7 | 28 | 564 | 16 | E |
| *Pomona Lake | Howell | 26, 26N, 9W | 1 | -- | 50 | 605 | 10 | E |
| | | | | | | | | |
| Ripley Lake | Ripley | 10, 23N, 1E | 7 | 1.7 | 28 | 719 | 21 | E |
| Roby Lake | Texas | 3, 32N, 11W | 9 | 2.1 | 17 | 427 | 5 | M |
| Shawnee Lake | Dent | NW17, 34N, 5W | 8 | 1.8 | 26 | 553 | 20 | E |
| Lake Shayne | Washington | 25, 37N, 3E | 21 | 3.0 | 6 | 268 | 1 | O |
| Shepard Mtn. Lake | Iron | 1, 33N, 3E | 1 | 1.1 | 32 | 422 | 16 | E |
| | | | | | | | | |
| Sims Valley Lake | Texas | 17, 27N, 8W | 9 | 1.1 | 26 | 498 | 13 | M |
| Lake Springfield | Greene | 20, 61N, 16W | 8 | 0.9 | 59 | 1,005 | 20 | E |
| Stockton Lake | Cedar | 15, 34N, 26W | 23 | 2.7 | 14 | 448 | 7 | M |
| Sunnen Lake | Washington | 4, 37N, 1E | 13 | 2.7 | 13 | 282 | 4 | M |
| Table Rock Lake | Stone | 22, 22N, 22W | 18 | 3.2 | 11 | 401 | 5 | M |
| | | | | | | | | |
| Lake Taneycomo | Taney | 8, 23N, 20W | 7 | 3.3 | 23 | 787 | 3 | M |
| | | | | | | | | |
| <u>SOUTHEASTERN LOWLANDS</u> | | | | | | | | |
| | | | | | | | | |
| Big Oak Tree SP L. | Mississippi | 14, 23N, 16E | 2 | 0.6 | 44 | 530 | 12 | E |
| Upper Big Lake | Mississippi | 25, 27N, 16E | 2 | 0.3 | 339 | 2,050 | 181 | HE |

[1]Secchi depth (m)
[2]Total Phosphorus (µg/L)
[3]Total Nitrogen (µg/L)
[4]Chlorophyll A (µg/L)
[5]Trophic State: O=Oligotrophic, M=Mesotrophic, E=Eutrophic, HE=Hypereutrophic
*Unclassified Lake
†Classified as Stream

Trophic status correlates strongly with physiographic regions of the state. In agricultural northern and western Missouri, most lakes of known trophic state are eutrophic, while in the Ozark Border region, trophic states are more equally divided between eutrophic and either mesotrophic or oligotrophic lakes, and lean toward mesotrophic states in the Ozark Plateau. Most known hypereutrophic lakes are in glaciated northern Missouri (and most of those in the Ozark Border region are clearly influenced by extraordinary nonpoint sources), while nearly all oligotrophic lakes are in unglaciated, highly weathered Ozark terrain.

Controlling Pollution in Lakes

In Missouri, agriculture is considered the primary source of nonpoint source pollution, although urban areas represent a very significant source, as do abandoned mine lands, to a lesser extent. The department works to implement effective and appropriate Best Management Practices in the watersheds of impaired lakes and reservoirs.

In-lake management techniques that were previously funded under Section 314 can now be funded under Section 319 in the context of an appropriate Nonpoint Source (NPS) project. Several in-lake management techniques are eligible for Section 319 funding, including water level drawdown, shading, and biological controls such as fish or insects, and planting or harvesting of aquatic plants.

In addition, the department conducts and helps fund monitoring on lakes throughout Missouri. This includes statewide lake assessments and volunteer lake monitoring that is now funded through Section 319. For example, the University of Missouri-Columbia's Statewide Lake Assessment Program evaluates approximately 100 lakes each year. The program began collecting annual samples in 1989, with some samples taken as far back as 1978.

The 319 program supplies grants to improve lakes, such as projects that provide information and education. The department also works with several watershed groups on a regular basis. At least 77 watershed groups have been formed in Missouri. These groups work to educate and inform residents and landowners in their watershed about techniques they can use to minimize nonpoint source pollution.

The department's Soil and Water Conservation Program also helps Missouri's agricultural landowners conserve soil and water resources through several incentive programs, which are funded by a statewide sales tax. These programs include the Cost-Share Program, Loan Interest-Share Program and Agricultural Nonpoint Source Special Area Land Treatment Program (AgNPS SALT). Practices offered for cost-share reduce soil erosion by a variety of methods that may include increasing crop residue, improving vegetation, diversion or containment of water to facilitate slower release, protection of stream bank and forested areas from livestock, and reduction of wind erosion. Cost-share and other incentives are also available through the Natural Resources Conservation Service. AgNPS SALT projects focus on decreasing agricultural nonpoint source pollution and usually encompass watersheds averaging 50,000 acres in size. There are 33 active SALTs. Of the 67 that have been completed, five focused primarily on protecting lakes in the watershed. The Missouri Department of Conservation also has programs and information to help Missourians manage private lakes.

Total Maximum Daily Loads also help to reduce pollution in Missouri lakes and reservoirs. The program began in 1999 and as of January 31, 2011, 131 TMDL studies have been completed. Six of these were for lakes, and focused primarily on reducing nonpoint source pollution entering the lake. Appendix II shows the proposed schedule to complete needed TMDLs.

**STATUS OF WETLANDS**

Originally, about 4.8 million acres in Missouri (10.7 percent of the land surface of the state) were wetlands. Today, it is estimated that only about 113,000 acres remain. Several state and federal agencies have recognized the need to preserve and enhance our remaining wetlands.

The department's Water Resources Center administers the State Wetlands Conservation Plan, which encourages the protection and restoration of wetlands and provides technical assistance to other agencies involved in wetland issues. With the help of state and federal agencies, the department has completed several projects, including studies assessing urban wetlands, identifying types of wetlands through image analysis, determining the hydrology of Missouri riparian wetlands, and an assessment of specific wetland mitigation sites. Currently the department and its partners are working to locate small headwater wetlands in agricultural areas and establish a dollar value for wetlands under past, present and future conditions.

The Missouri Department of Conservation currently has 15 large, intensively managed wetlands, comprising approximately 81,000 acres. These wetlands are mainly in the floodplains of the Missouri, Mississippi, Grand, St. Francis, and Osage rivers.

In 1994, the U.S. Fish and Wildlife Service began the process of acquiring land from willing sellers in the Missouri River floodplain for a national wildlife refuge called Big Muddy. The project authorizes the purchase of up to 60,000 acres in 25 to 30 units between Kansas City and St. Louis. The refuge consists of over 16,700 acres of land in ten units as of April 2012. Although access is limited at some units, all are publicly accessible. The refuge focuses on restoring several kinds of riverine and floodplain habitat, allowing lands to interact naturally with the river and act as seasonal wetlands.

The Natural Resources Conservation Service Wetlands Reserve Program, begun in 1992, purchases easements of wetlands and provides funds for restoration of those wetlands. There are presently 858 easements covering 119,168 acres in place in Missouri.

Together MDC, USFWS and NRCS have protected more than 260,000 acres of wetlands through easements or purchases, restored more than 43,000 acres, and enhanced more than 41,000 acres in Missouri.

Four websites providing information on Missouri's wetlands and efforts to restore wetlands are given below:

www.dnr.mo.gov/env/wrc/wetlands.htm
mdc.mo.gov/landwater-care/wetlands-management
www.mo.nrcs.usda.gov/programs/wrp/wrp.html
www.fws.gov/midwest/BigMuddy/

The following website describes the Missouri Resource Assessment Partnership (MoRAP) program, which calculated the figure of 113,000 wetland acres in Missouri, although the detailed numbers are no longer available. Wetland acreage was considered to be the sum of two categories of land cover, "Swamp" and "Marsh and Wet Herbaceous Vegetation". The relatively small total may be the result of a stricter definition of these categories than is necessary to put land under easement.

morap.missouri.edu/Projects.aspx

# CHAPTER 4. GROUNDWATER ASSESSMENT

## BACKGROUND

Less than half of Missourians rely on groundwater as the source of their drinking water. Groundwater is the major source of drinking water in the Ozarks and the Southeast Lowlands for both public and private supplies. The cities of St. Joseph, Independence, Columbia, and St. Charles use groundwater from the alluvial aquifer of the Missouri River. In the plains region of the state, many small communities are able to obtain adequate water from shallow alluvial wells near rivers or large creeks, and many individual households still rely on the shallow upland aquifer even though it yields only very small amounts of water.

In the Ozarks, groundwater yields are usually large and of excellent quality, as witnessed by the fact that unlike cities in other areas of the state, many municipalities there pump groundwater directly into their water supplies without treatment. However, the geologic character of the Ozarks that supplies it with such an abundance of groundwater, namely its ability to funnel large amounts of rainfall and surface runoff to the groundwater system, can present problems for groundwater quality. This is because much surface water flows directly to groundwater through cracks, fractures or solution cavities in the bedrock, with little or no filtration. Contaminants from leaking septic tanks or storage tanks, or surface waters affected by domestic wastewater, animal feedlots and other pollution sources can move directly into groundwater through these cavities in the bedrock.

As in the Ozarks, groundwater in the southeast lowlands is abundant and of good quality. Unlike in the Ozarks, contaminants are filtered by thick deposits of sand, silt and clay as they move through the groundwater system. Because of this, while shallow groundwater wells are subject to the same problems with elevated levels of nitrate or bacteria as are found locally in the Ozark aquifer and can also have low levels of pesticides, deep wells are generally unaffected by contaminants.

Shallow groundwater in the plains of northern and western Missouri tends to be somewhat more mineralized and to have taste and odor problems due to high levels of iron and manganese. Like shallow wells in the southeast lowlands, wells in this part of the state can be affected by nitrates, bacteria or pesticides.

In urban areas, alluvial aquifers of large rivers such as the Missouri and the Meramec that serve water supplies have occasionally been locally contaminated by spills or improper disposal of industrial or commercial chemicals.

## WELL CONSTRUCTION AND GROUNDWATER QUALITY

Well water quality is greatly influenced by well construction. Public drinking water wells and many private wells are deep, and properly cased and grouted. These wells rarely become contaminated. However, many private wells are shallow or not properly cased. These wells can be easily contaminated by septic tanks, feedlots or chemical mixing sites near the well. Studies in Missouri have shown that two-thirds of wells contaminated by pesticides are less than 35 feet deep. The three most common problems in private wells are bacteria, nitrate and pesticides. Water quality standards for all of these pollutants can occasionally be exceeded in private wells. State regulations include standards for construction and wellhead protection for all new wells.

## MAJOR POTABLE AQUIFERS IN MISSOURI

The locations of the major aquifers providing drinkable water in Missouri are described below. The unconfined aquifers are those under water table conditions (the pressure at the water table is the atmospheric pressure). These unconfined aquifers tend to yield greater amounts of water, but are also more easily contaminated by activities occurring at the land surface. In confined aquifers, the upper level of the saturated zone is restricted so that the pressure level is greater than normally exists at that level of saturation. Confined aquifers are generally recharged more slowly than unconfined aquifers but are better protected from surface contaminants.

### Glacial Till Aquifer

This aquifer covers most of Missouri north of the Missouri River. Glacial till is an unsorted mixture of clay, sand and gravel, with occasional boulders and lenses of sand or gravel. Loess, fine wind-blown silt deposits four to eight feet in depth, covers the till on the uplands. In places, the till is underlain by sorted deposits of sand or gravel. Although this aquifer is unconfined, surface water infiltrates very slowly and groundwater yields are very small. In scattered areas, the till has buried old river channels that remain as large sand or gravel deposits that contain much more groundwater than the till. Some households rely on this aquifer for drinking water, but it is generally inadequate as a source for municipal water supply.

### Alluvial Aquifer

Alluvial aquifers are the unconfined aquifers on the floodplains of rivers and are of Quaternary age. In Missouri, the largest of these aquifers lie along the Missouri and Mississippi rivers, reaching their widest extent in the southeast lowlands, where they extend as far as 50 miles west of the Mississippi River. Many small communities north of the Missouri River use the alluvial aquifers of nearby streams for their drinking water supply, and the Missouri River alluvium supplies the cities of St. Joseph, Independence and Columbia and sections of St. Charles County. In the southeast lowlands, most private water supplies and about 45 percent of people served by public water supplies use water from the alluvial aquifer. Agricultural

irrigation consumes much more water in this area of Missouri than does domestic water use. All agricultural irrigation water is drawn from the alluvial aquifer.

Wilcox-McNairy Aquifer

These two aquifers lie beneath much of the alluvial aquifer of the southeast lowlands. They are in unconsolidated or loosely consolidated deposits of marine sands and clays of Tertiary and Cretaceous age. Except where the McNairy aquifer outcrops in the Benton Hills and along Crowley's Ridge, these aquifers are confined. They yield abundant amounts of good quality water, and they provide the water for 55 percent of people served by public supplies. In the southeastern part of this region, the deeper of these aquifers, the McNairy, becomes too mineralized to be used for drinking water supply. These two aquifers appear to be unaffected by contaminants of human origin.

Ozark-St. Francois Aquifer

This aquifer covers most of the southern and central two-thirds of Missouri. It is composed of dolomites and sandstones of Ordovician and Cambrian age. Most of the aquifer is unconfined. This aquifer is used for almost all public and private drinking water supplies in this area of Missouri. Exceptions would include supplies in the St. Francois Mountains, such as Fredericktown and Ironton, where the aquifer has been lost due to geologic uplift and erosion, and in Springfield, where demand is so heavy that groundwaters are supplemented with water from three large reservoirs and the James River.

Yields and water quality are typically very good, but in many areas, the bedrock is highly weathered, contains many solution cavities, and can transmit contaminated surface waters into the groundwater rapidly with little or no filtration. Where the confined portion of the aquifer is overlain only by the Mississippian limestones of the Springfield aquifer, the confined Ozark aquifer continues westward for 80 miles or more as a potable water supply, serving the communities of Pittsburg, Kansas and Miami, Oklahoma. However, where it is also overlain by less permeable Pennsylvanian bedrock, the confined Ozark becomes too mineralized for drinking within 20 to 40 miles.

The unconfined Ozark-St. Francois aquifer is susceptible to contamination from surface sources. Increasing urbanization and increasing numbers of livestock are threats to the integrity of portions of this valuable aquifer.

Springfield Aquifer

This aquifer covers a large portion of southwestern Missouri. It is composed of Mississippian limestones that are highly weathered, particularly in the eastern portion of the aquifer. The aquifer is unconfined and surface water in many areas is readily transmitted to groundwater. Urbanization and livestock production affect this aquifer. Elevated nitrates and bacterial contamination are common problems in groundwater of the Springfield aquifer.

**GROUNDWATER QUALITY SUMMARY TABLES**

Table 10 lists the major sources of groundwater contamination in Missouri, major contaminants, and reasons why these sources are the most important. Table 11 summarizes groundwater quality problems at hazardous waste sites. Table 12 provides information on levels of nitrate, pesticides and other toxic organics in public drinking water wells in a particular Missouri aquifer. Table 13 gives the present status of Missouri's groundwater protection strategy.

Table 10. Major Sources of Groundwater Contamination.

| Contaminant Source | 10 Highest Priority Sources (X)[1] | Significant Risk Factors[2] | Contaminants[3] |
|---|---|---|---|
| **Agricultural Activities** | | | |
| Agricultural chemical facilities | | | |
| Animal feedlots | | | |
| Drainage wells | | | |
| Fertilizer applications | X | A,C,D,E | a |
| Irrigation practices | | | |
| Pesticide applications | X | A,B,C,D,E | b |
| **Storage and Treatment Activities** | | | |
| Land application | X | A,D,E | a,c |
| Material stockpiles | | | |
| Storage tanks (above ground) | | | |
| Storage tanks (underground) | X | A,B,C,D,E | d |
| Surface impoundments | | | |
| Waste piles | | | |
| Waste tailings | | | |
| **Disposal Activities** | | | |
| Deep injection wells | | | |
| Landfills | | | |
| Septic systems | X | A,D,E | a,c |
| Shallow injection wells | | | |
| **Other** | | | |
| Hazardous waste generators | | | |
| Hazardous waste sites | X | A,B,C,D | b,e,f,g |
| Industrial facilities | X | A,B,C,E | a,h,i,j |
| Material transfer operations | | | |
| Mining and mine drainage | X | A,E | f |
| Pipelines and sewer lines | | | |
| Salt storage and road salting | | | |
| Salt water intrusion | X | C | k |
| Spills | X | A,B,C,E | b,d,e,h |
| Transportation of materials | | | |
| Urban runoff | | | |

| | | | |
|---|---|---|---|
| Other sources (please specify) | | | |
| Other sources (please specify) | | | |

[1]Not in priority order.

[2]A. Human health or environmental toxicity risk
B. Size of population at risk
C. Location of sources relative to drinking water sources
D. Number and/or size of contaminant sources
E. Hydrogeologic sensitivity

[3]a. Nitrate
b. Organic Pesticides
c. Pathogens (Bacteria, Protozoa, Viruses)
d. Petroleum Compounds
e. Halogenated Solvents
f. Metals
g. Radionuclides
h. Ammonia
i. Pentachlorophenol
j. Dioxin
k. Salinity/Brine

Table 11. Groundwater Contamination Summary.

Hydrogeologic Setting: All Aquifers
Data Reporting Period: 2010-2011

| Source Type | Number of sites | Number of sites that are listed and/or have confirmed releases | Number with confirmed groundwater contamination | Contaminants* | Number of site investigations (optional) | Number of sites that have been stabilized or have had the source removed (optional) | Number of sites with corrective action plans (optional) | Number of sites with active remediation (optional) | Number of sites with cleanup completed (optional) |
|---|---|---|---|---|---|---|---|---|---|
| NPL | 25 | 25 | 25 | 1 | | - | - | - | - |
| CERCLIS (non-NPL) | 30 | 30 | 30 | 1 | | - | - | - | - |
| DOD/DOE | 305 | 37 | 33 | 1,2,3,4 | 50 | 213 | 231 | 18 | 45 |
| LUST | 3,578 | 195 | 55 | 3 | 165 | 82 | - | 1,090 | 74 |
| RCRA Corrective Action | 89 | 89 | 55 | 1,2,3,4 | 49 | 39 | 27 | 26 | 16 |
| Underground Injection | 22 | 22 | 22 | 1,3 | 22 | | 22 | 22 | |
| State Sites | 856 | 856 | 387 | 1,2,3,4 | 847 | 575 | 575 | 49 | 575 |
| Nonpoint Sources | | | | | | | | | |
| Other (specify) | | | | | | | | | |

NPL - National Priority List ; DOE- Department of Energy ; DOD- Department of Defense; CERCLIS - Comprehensive Environmental Response, Compensation, and Liability Information System; LUST - Leaking Underground Storage Tanks; RCRA - Resource Conservation and Recovery Act. Underground Injection - includes sites where chemicals were injected into groundwater as part of approved remediation plan.

*Contaminants: 1- VOAs, SVOAs, Solvents, PCBs, Dioxin, PAHs, Herbicides, Pesticides, Metals, Explosives
2- VOAs, PCBs, Pesticides, Dioxin, Metals, Radionuclides, SVOCs, etc.
3- BTEX, TPH, MTBE, PAHs, Metals, SVOA
4- Creosote, Pentachlorophenol, Organic Solvents, Chlorinated Solvents, Petroleum, Asbestos

Table 12. Aquifer Monitoring Data.

Hydrogeologic Setting: Unconsolidated Aquifers (Mississippi, Missouri, Grand, Nodaway)
Data Reporting Period: 2003-2011
Data below are from 7 randomly selected wells that draw from this aquifer. Samples were collected from the well head. NR= Not Reported

| Name Of Supply | 1,1-Dichloroethane (ug/L) | 1,1-Dichloroethylene (ug/L) | Alkalinity, Caco3 Stability (mg/L) | Alkalinity, Total (mg/L) |
|---|---|---|---|---|
| Elsberry | 5.7 | 0.6 | NR | NR |
| Independence | NR | NR | NR | 3815 |
| Lagrange | NR | NR | 228 | NR |
| Maitland | NR | NR | NR | NR |
| Mo American Brunswick | NR | NR | 348 | NR |
| Mo American St Joseph | NR | NR | NR | NR |
| Mound City | NR | NR | NR | NR |
| **Name Of Supply** | **Arsenic (ug/L)** | **Barium (ug/L)** | **Calcium (mg/L)** | **Carbon, Total (mg/L)** |
| Elsberry | NR | NR | NR | NR |
| Independence | NR | NR | NR | 34.05 |
| Lagrange | NR | 89.9 | 74.5 | NR |
| Maitland | NR | NR | NR | NR |
| Mo American Brunswick | 5.12 | 390 | 122 | NR |
| Mo American St Joseph | NR | NR | NR | NR |
| Mound City | NR | NR | NR | NR |
| **Name Of Supply** | **Chloride (mg/L)** | **Chromium (ug/L)** | **Combined Radium (226 & 228) (pci/L)** | **Copper, Free (ug/L)** |
| Elsberry | NR | NR | NR | NR |
| Independence | NR | NR | NR | NR |
| Lagrange | 21.3 | NR | 1.1 | 2.42 |
| Maitland | NR | NR | NR | NR |
| Mo American Brunswick | 90.7 | 3.35 | NR | 2.43 |
| Mo American St Joseph | NR | NR | NR | NR |
| Mound City | NR | NR | NR | NR |
| **Name Of Supply** | **Fluoride (mg/L)** | **Hardness, Carbonate (mg/L)** | **Iron (ug/L)** | **Lead (ug/L)** |
| Elsberry | NR | NR | NR | NR |
| Independence | NR | NR | NR | NR |
| Lagrange | 0.2 | 1.65 | 595 | 1.12 |
| Maitland | NR | NR | NR | NR |
| Mo American Brunswick | 0.31 | 420 | 9050 | NR |
| Mo American St Joseph | NR | NR | NR | NR |
| Mound City | NR | NR | NR | NR |
| **Name Of Supply** | **Magnesium (mg/L)** | **Manganese (ug/L)** | **Methyl Tert-Butyl Ether (ug/L)** | **Nickel (ug/L)** |
| Elsberry | NR | NR | 12.29 | NR |
| Independence | NR | NR | NR | NR |
| Lagrange | 20.9 | 615 | NR | 2.58 |
| Maitland | NR | NR | NR | NR |
| Mo American Brunswick | 28 | 597 | NR | 1.81 |
| Mo American St Joseph | NR | NR | NR | NR |
| Mound City | NR | NR | 31.35 | NR |

| Name Of Supply | Nitrate-Nitrite (mg/L) | Nitrogen-Ammonia As (N) (mg/L) | pH (pH) | Potassium (mg/L) |
|---|---|---|---|---|
| Elsberry | NR | NR | NR | NR |
| Independence | NR | NR | NR | NR |
| Lagrange | NR | NR | 7.47 | 2.2 |
| Maitland | 133.46 | NR | NR | NR |
| Mo American Brunswick | NR | 0.37 | 7.29 | 4.53 |
| Mo American St Joseph | NR | NR | NR | NR |
| Mound City | NR | NR | NR | NR |

| Name Of Supply | Radium-228 (pci/L) | Radon (pci/L) | Sodium (mg/L) | Sulfate (mg/L) |
|---|---|---|---|---|
| Elsberry | NR | NR | NR | NR |
| Independence | NR | NR | NR | NR |
| Lagrange | 1.1 | NR | 12.2 | 33.4 |
| Maitland | NR | NR | NR | NR |
| Mo American Brunswick | NR | 238 | 63.5 | 45 |
| Mo American St Joseph | NR | 884 | NR | NR |
| Mound City | NR | NR | NR | NR |

| Name Of Supply | TDS (mg/L) | Trichloroethylene (ug/L) | Zinc (ug/L) |
|---|---|---|---|
| Elsberry | NR | 3.37 | NR |
| Independence | NR | NR | NR |
| Lagrange | 321 | NR | 5.86 |
| Maitland | NR | NR | NR |
| Mo American Brunswick | 598 | NR | 15 |
| Mo American St Joseph | NR | NR | NR |
| Mound City | NR | NR | NR |

Table 13. Summary of Groundwater Protection Programs.

| Program or Activities | Check (X) | Implementation Status | Responsible State Agency |
|---|---|---|---|
| Active SARA Title III Program | X | Fully Established | MDPS/SEMA |
| Ambient Groundwater Monitoring System | | N/A | |
| Aquifer Mapping and Characterization | X | Continuing Effort | DNR |
| Aquifer Vulnerability Assessment | | N/A | |
| Comprehensive Data Management System | | N/A | |
| EPA-Endorsed Core Comprehensive State Groundwater Protection Program (CSGWPP) | | N/A | |
| Groundwater Best Management Practices | X | Continuing Effort | DNR |
| Groundwater Classification | | N/A | |
| Groundwater Discharge Permits | X | Fully Established | DNR |
| Groundwater Legislation | X | Developed | DNR |
| Groundwater-Level Observation Network | X | Fully Established | DNR |
| Groundwater Monitoring at Sanitary Landfills | X | Fully Established | DNR |
| Groundwater Quality Standards | X | Fully Established | DNR |
| Interagency Coordination for Groundwater Protection Initiatives | X | Fully Established | DNR |
| Nonpoint Source Controls | X | Continuing Effort | DNR |
| Pesticide State Management Plan | X | Developed | MDA |
| Pollution Prevention Program | X | Continuing Effort | DNR |
| Resource Conservation and Recovery Act (RCRA) Primacy | X | Fully Established | DNR |
| State RCRA Program Incorporating More Stringent Requirements Than RCRA Primacy | X | Fully Established | DNR |
| State Septic System Regulations | X | Fully Established | MDHSS |
| State Superfund | X | Fully Established | DNR |
| Underground Injection Control Program | X | Fully Established | DNR |
| Underground Storage Tank Installation Requirements | X | Fully Established | DNR |
| Underground Storage Tank Permit Program | | N/A | |
| Underground Storage Tank Remediation Fund | | N/A | |
| Vulnerability Assessment for Drinking Water/ Wellhead Protection | X | Fully Established | DNR |
| Well Abandonment Regulations | X | Fully Established | DNR |
| Wellhead Protection Program (EPA-Approved) | X | Fully Established | DNR |
| Well Installation Regulations | X | Fully Established | DNR |

MDPS/SEMA: Missouri Department of Public Safety, State Emergency Management Agency
MDA: Missouri Department of Agriculture
MDHSS: Missouri Department of Health and Senior Services

Notes:

Active SARA Title III Program: This program is administered by the Missouri Department of Public Safety, State Emergency Management Agency.

Ambient Groundwater Monitoring System: There is no system per se for monitoring the quality of groundwater, as there is for groundwater levels. The state has participated in several opportunities to monitor ambient groundwater, such as impact analyses following the floods of 1993.

Aquifer Mapping and Characterization: The Water Resources Center participates in aquifer mapping. No present systematic activity is done, although these activities may be conducted in concert with hazardous substance release investigations. The department's Public Drinking Water Branch is currently working with the Water Resources Center to perform aquifer monitoring and characterization to delineate which aquifer zones are responsible for the highest concentration of radionuclides. In addition, the U.S. Geological Survey has done considerable work on aquifer characteristics.

Aquifer Vulnerability Assessment: The department does not have a specific program in place, but the department's Water Resources Center collects groundwater supply data and performs resource assessments.

Comprehensive Data Management System: None.

EPA-Endorsed Core Comprehensive State Groundwater Protection Program: No formal program has been established.

Groundwater Best Management Practices: Some BMPs are established as part of the Nonpoint Source Management Plan. The Soil and Water Conservation Program also provides cost-share to help agricultural landowners install BMPs on their land.

Groundwater Classification: There is no classification system at this time, although it has been proposed in the past.

Groundwater Discharge Permits: Underground Injection Control permits are issued jointly by the department's Division of Geology and Land Survey and Water Protection Program.

Groundwater Legislation: The Cave Resources Act and Clean Water Law deal directly with groundwater. Other laws, such as the Dead Animal Disposal Statute, prescribe protections for groundwater. There is no comprehensive groundwater protection statute per se.

Groundwater-Level Well Observation Network: Established in 1951, this network is operated by the department's Water Resources Center and currently consists of 75 wells.

Groundwater Monitoring at Sanitary Landfills: The department's Solid Waste Management Program oversees monitoring at sanitary landfills.

Groundwater Quality Standards: Standards have been established as part of state water quality standards.

Interagency Coordination for Groundwater Protection Initiatives: Opportunities for monthly coordination are provided through the Water Quality Coordinating Committee.

Nonpoint Source Controls: The nonpoint source management program provides guidance for voluntary controls. In addition, the department's Soil and Water Conservation Program provides cost-share for soil and water conservation.

Pesticide State Management Program: A general pesticide and water quality management plan was prepared by the Missouri Department of Agriculture in conjunction with the Missouri Department of

Natural Resources. The plan addresses both groundwater and surface water, and has been concurred with by EPA.

Pollution Prevention Program: The department uses outreach and assistance to educate Missourians on pollution prevention.

Resource Conservation and Recovery Act (RCRA) Primacy: RCRA is administered by the department's Hazardous Waste Program.

State RCRA Program Incorporating More Stringent Requirements than RCRA Primacy: Requirements are administered by the department's Hazardous Waste Program.

State Septic System Regulations: Regulations are administered by the Department of Health and Senior Services.

State Superfund: This program is administered by the department's Hazardous Waste Program, and provides for a state registry of confirmed abandoned hazardous waste disposal sites.

Underground Injection Control Program: The program is administered by the department's Division of Geology and Land Survey.

Underground Storage Tank Installation Requirements: Requirements are administered by the department's Hazardous Waste Program.

Underground Storage Tank Permit Program: Tanks are required to be registered but not permitted.

Underground Storage Tank Remediation Fund: The department does not have an underground storage tank remediation fund, but does have a similar fund called the Petroleum Storage Tank Insurance Fund. It was initially established to provide underground storage tank owners and operators with assistance in meeting state and federal financial responsibility requirements. It has since been amended, broadening eligibility and expanding benefits.

Vulnerability Assessment for Drinking Water/Wellhead Protection: Assessments are administered by the Department's Water Protection Program. A vulnerability assessment of Missouri drinking water to chemical contamination was conducted and implemented in 1991.

Well Abandonment Regulations: Regulations are administered by the department's Division of Land Geology and Land Survey.

Wellhead Protection Program (EPA-approved): This program is administered by the department's Water Protection Program.

Well Installation Regulations: Regulations are administered by the department's Water Protection Program.

For more information, call the Department of Natural Resources at (573)751-1300.

## Appendix I
## Impaired or Potentially Impaired Waters of Missouri

Table 14. 2012 Missouri Section 303(d) List,
As Approved by the Missouri Clean Water Commission,
May 2, 2012

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2012 | 2188.00 | Antire Cr. | P | 1.9 | 1.9 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 712451 | 4264469 | 710126 | 4264454 | St. Louis | 1 |
| 2012 | 2188.00 | Antire Cr. | P | 1.9 | 1.9 | Mi. | pH (W) | Source Unknown | AQL | LWW, WBC B | 712451 | 4264469 | 710126 | 4264454 | St. Louis | 1 |
| 2012 | 752.00 | Bass Cr. | C | 4.4 | 4.4 | Mi | Escherichia coli (W) | Source Unknown | WBC A | AQL, LWW | 565035 | 4297419 | 561522 | 4298652 | Boone | 1 |
| 2012 | 3240.00 | Baynham Br. | P | 4.0 | 4 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 379677 | 4092590 | 374820 | 4091654 | Newton | 1 |
| 2012 | 3265.00 | Beaver Br. | P | 2.0 | 2.0 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, WBC B | 371093 | 4059701 | 371016 | 4056979 | McDonald | 1 |
| 2006 | 2760.00 | Bee Fk. | C | 1.4 | 8.7 | Mi. | Lead (W) | Fletcher Lead Mine/Mill | AQL | CLF, LWW, WBC A | 668836 | 4145688 | 670779 | 4145991 | Reynolds | 1 |
| 2008 | 3966.00 | Bee Fk. | U | 0.8 | n/a | Mi. | Lead (S) | Fletcher Lead Mine/Mill | GEN | | 667504 | 4145795 | 668836 | 4145688 | Reynolds | 1,5 |
| 2006 | 7365.00 | Belcher Branch Lake | L3 | 55.0 | 55 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, SCR, WBC B | 351065 | 4383634 | 351274 | 4382886 | Buchanan | 1 |
| 2006 | 444.00 | Big Cr. | P | 1.0 | 22 | Mi | Ammonia, Total (W) | Bethany WWTP | AQL | DWS, LWW, WBC B | 409703 | 4456645 | 409044 | 4455654 | Harrison | 1 |
| 2006 | 444.00 | Big Cr. | P | 6.0 | 22 | Mi | Oxygen, Dissolved (W) | Bethany WWTP | AQL | DWS, LWW, WBC B | 409703 | 4456645 | 408309 | 4451145 | Harrison | 1 |
| 2012 | 1250.00 | Big Cr. | P | 70.5 | 70.5 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 384117 | 4301048 | 422204 | 4249325 | Jackson/ Henry | 1 |
| 2012 | 2673.00 | Big Cr. | P | 28.7 | 28.7 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | CLF, LWW, WBC B | 602889 | 4121487 | 623380 | 4141676 | Texas/ Shannon | 1 |
| 2010 | 2916.00 | Big Cr. | P | 1.8 | 34.1 | Mi. | Cadmium (S) | Glover smelter | AQL | CLF, LWW, SCR, WBC A | 704416 | 4150512 | 704712 | 4147823 | Iron | 1 |
| 2010 | 2916.00 | Big Cr. | P | 1.8 | 34.1 | Mi. | Lead (S) | Glover smelter | AQL | CLF, LWW, SCR, WBC A | 704416 | 4150512 | 704712 | 4147823 | Iron | 1 |
| 2010 | 1578.00 | Big Piney R. | P | 4.0 | 8 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | DWS, LWW, SCR, WBC A | 579857 | 4108429 | 583131 | 4112462 | Texas | 1 |
| 2006 | 2080.00 | Big R. | P | 18.6 | 68 | Mi. | Cadmium (S) | Old Lead Belt tailings | AQL | IND, LWW, WBC A | 712102 | 4194405 | 701052 | 4226039 | St. Francois | 1 |
| 2006 | 2080.00 | Big R. | P | 18.6 | 68 | Mi. | Zinc (S) | Old Lead Belt tailings | AQL | IND, LWW, WBC A | 712102 | 4194405 | 701052 | 4226039 | St. Francois | 1 |
| 2012 | 111.00 | Black Cr. | C | 19.4 | 19.4 | Mi. | Escherichia coli (W) | Shelbyville WWTF, Nonpoint Source | WBC B | AQL, LWW | 581889 | 4405281 | 593146 | 4393284 | Shelby | 1 |
| 2012 | 111.00 | Black Cr. | C | 19.4 | 19.4 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 581889 | 4405281 | 593146 | 4393284 | Shelby | 1 |
| 2012 | 3825.00 | Black Cr. | P | 1.6 | 1.6 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, SCR, WBC B | 731265 | 4278201 | 732027 | 4276854 | St. Louis | 1 |
| 2012 | 3825.00 | Black Cr. | P | 1.6 | 1.6 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | SCR, WBC B | AQL, LWW, WBC B | 731265 | 4278201 | 732027 | 4276854 | St. Louis | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 2769.00 | Black R. | P | 47.1 | 47.1 | Mi. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | CLF, DWS, IRR, LWW, SCR, WBC A | 729879 | 4078164 | 729374 | 4042275 | Butler | 1 |
| 2008 | 2784.00 | Black R. | P | 39.0 | 39.0 | Mi. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | CLF, DWS, IRR, LWW, SCR, WBC A | 697916 | 4112187 | 729879 | 4078164 | Wayne/ Butler | 1 |
| 2006 | 3184.00 | Blackberry Cr. | C | 3.5 | 6.5 | Mi. | Chloride (W) | Asbury Power Plant | AQL | LWW, WBC B | 360855 | 4132389 | 361557 | 4128066 | Jasper | 1 |
| 2008 | 3184.00 | Blackberry Cr. | C | 3.5 | 6.5 | Mi. | Sulfate plus Chloride (W) | Asbury Power Plant | AQL | LWW, WBC B | 360855 | 4132389 | 361557 | 4128066 | Jasper | 1 |
| 2006 | 417.00 | Blue R. | P | 4.0 | 4 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, IND, LWW | 371193 | 4329008 | 372993 | 4332275 | Jackson | 2 |
| 2006 | 418.00 | Blue R. | P | 9.0 | 9 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, IND, LWW, SCR | 368407 | 4319629 | 371193 | 4329008 | Jackson | 1 |
| 2006 | 419.00 | Blue R. | P | 9.0 | 9 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC A | AQL, LWW, SCR | 364901 | 4313172 | 368407 | 4319629 | Jackson | 1 |
| 2006 | 421.00 | Blue R. | C | 11.0 | 11 | Mi. | Escherichia coli (W) | Runoff from Forest/ Grassland/ Parkland, Rural, Residential Areas, Urban Runoff/ Storm Sewers | WBC B | AQL, LWW, SCR | 360464 | 4301404 | 364901 | 4313172 | Jackson | 1 |
| 2012 | 1701.00 | Bonhomme Cr. | C | 2.5 | 2.5 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 709487 | 4282267 | 711335 | 4284026 | St. Louis | 1 |
| 2012 | 1701.00 | Bonhomme Cr. | C | 2.5 | 2.5 | Mi. | pH (W) | Source Unknown | AQL | LWW, WBC B | 709487 | 4282267 | 711335 | 4284026 | St. Louis | 1 |
| 2006 | 750.00 | Bonne Femme Cr. | P | 7.8 | 7.8 | Mi | Escherichia coli (W) | Source Unknown | WBC A | AQL, LWW | 560347 | 4298778 | 553841 | 4293824 | Boone | 1 |
| 2012 | 753.00 | Bonne Femme Cr. | C | 7.0 | 7 | Mi | Escherichia coli (W) | Source Unknown | WBC B | AQL, LWW | 565648 | 4303369 | 560347 | 4298778 | Boone | 1 |
| 2002 | 2034.00 | Bourbeuse R. | P | 136.7 | 136.7 | Mi. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | CLF, DWS, IRR, LWW, SCR, WBC A | 622853 | 4221435 | 684284 | 4252201 | Phelps/ Franklin | 1 |
| 2012 | 7003.00 | Bowling Green (Old) Lake | L1 | 28.2* | 28.2* | Ac. | Nitrogen, Total (W) | Nonpoint Source | AQL | DWS, LWW, WBC B | | | 658502 | 4356562 | Pike | 1 |
| 2012 | 7003.00 | Bowling Green (Old) Lake | L1 | 28.2* | 28.2* | Ac. | Phosphorus, Total (W) | Nonpoint Source | AQL | DWS, LWW, WBC B | | | 658502 | 4356562 | Pike | 1 |
| 2012 | 1796.00 | Brazeau Cr. | C | 10.8 | 10.8 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 793971 | 4174893 | 806967 | 4172945 | Perry | 1 |
| 2002 | 1371.00 | Brush Cr. | P | 4.0 | 4 | Mi. | Oxygen, Dissolved (W) | Humansville WWTP | AQL | LWW, WBC B | 448658 | 4182387 | 444772 | 4187316 | Polk/St. Clair | 1 |
| 2012 | 3273.00 | Buffalo Cr. | P | 8.0 | 8 | Mi. | Fishes Bioassessments (W) | Source Unknown | AQL | CLF, IRR, LWW, SCR, WBC A | 369204 | 4075685 | 363942 | 4068061 | Newton/ McDonald | 1 |
| 2006 | 1865.00 | Burgher Branch | C | 2.0 | 2 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, SCR, WBC B | 610212 | 4200276 | 611958 | 4199021 | Phelps | 1 |
| 2012 | 968.00 | Burris Fork | P | 13.2 | 13.2 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, SCR, WBC A | 528329 | 4260805 | 539737 | 4270178 | Moniteau | 1 |
| 2006 | 7057.00 | Busch Lake #35 | L3 | 51.0 | 51 | Ac | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, WBC B | | | 697821 | 4288225 | St. Charles | 1 |
| 2010 | 7627.00 | Busch Lake #37 | | 34.0 | 34 | Ac | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | GEN | | | | 691967 | 4287291 | St. Charles | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 3234.00 | Capps Cr. | P | 5.0 | 5 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, CDF, IRR, LWW, SCR | 408560 | 4082432 | 402565 | 4083048 | Barry | 1 |
| 2010 | 2288.00 | Castor River | P | 7.5 | 7.5 | Mi | Escherichia coli (W) | Rural NPS | WBC A | AQL, IRR, LWW, SCR | 760130 | 4115304 | 766458 | 4110867 | Bollinger | 1 |
| 2008 | 737.00 | Cedar Cr. | C | 7.9 | 37.4 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, SCR, WBC B | 574525 | 4320028 | 573573 | 4311774 | Boone | 1 |
| 2010 | 1344.00 | Cedar Cr. | P | 10.0 | 31 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | IRR, LWW, SCR, WBC A | 419910 | 4170045 | 422889 | 4179237 | Cedar | 1 |
| 2008 | 1344.00 | Cedar Cr. | P | 10.0 | 31 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | IRR, LWW, SCR, WBC A | 419910 | 4170045 | 422889 | 4179237 | Cedar | 1 |
| 2010 | 1357.00 | Cedar Cr. | C | 16.2 | 16.2 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, WBC B | 412830 | 4154260 | 419910 | 4170045 | Cedar | 1 |
| 2008 | 1357.00 | Cedar Cr. | C | 16.2 | 16.2 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 412830 | 4154260 | 419910 | 4170045 | Cedar | 1 |
| 2006 | 3203.00 | Center Cr. | P | 19.0 | 26.8 | Mi. | Cadmium (S) | Tri-State Mining District | AQL | CLF, IND, IRR, LWW, SCR, WBC A | 374188 | 4114507 | 356392 | 4112870 | Jasper | 1 |
| 2006 | 3203.00 | Center Cr. | P | 19.0 | 26.8 | Mi. | Cadmium (W) | Tri-State Mining District | AQL | CLF, IND, IRR, LWW, SCR, WBC A | 374188 | 4114507 | 356392 | 4112870 | Jasper | 1 |
| 2006 | 3203.00 | Center Cr. | P | 19.0 | 26.8 | Mi. | Lead (S) | Tri-State Mining District | AQL | CLF, IND, IRR, LWW, SCR, WBC A | 374188 | 4114507 | 356392 | 4112870 | Jasper | 1 |
| 2006 | 3203.00 | Center Cr. | P | 19.0 | 26.8 | Mi. | Zinc (S) | Tri-State Mining District | AQL | CLF, IND, IRR, LWW, SCR, WBC A | 374188 | 4114507 | 356392 | 4112870 | Jasper | 1 |
| 2008 | 3210.00 | Center Cr. | P | 21.0 | 21 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, IND, IRR, LWW, SCR | 404363 | 4099549 | 383685 | 4107345 | Newton/ Jasper | 1 |
| 2010 | 3214.00 | Center Cr. | P | 4.9 | 4.9 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, CDF, IND, IRR, LWW, SCR | 410293 | 4100642 | 404363 | 4099549 | Lawrence/ Newton | 1 |
| 2006 | 3168.00 | Chat Cr. | C | 2.1 | 2.1 | Mi. | Cadmium (W) | Baldwin Park Mine | AQL | LWW, SCR, WBC B | 436447 | 4092367 | 432992 | 4092650 | Lawrence | 1 |
| 2012 | 1781.00 | Cinque Hommes Cr. | C | 8.3 | 17.1 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 779380 | 4178472 | 786085 | 4185604 | Perry | 1 |
| 2006 | 1333.00 | Clear Cr. | P | 15.5 | 15.5 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC A | 402292 | 4186739 | 417798 | 4205707 | Vernon/St. Clair | 1 |
| 2006 | 1336.00 | Clear Cr. | C | 15.0 | 15 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 391893 | 4172796 | 402292 | 4186739 | Vernon | 1 |
| 2006 | 3238.00 | Clear Cr. | P | 11.1 | 11.1 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 410982 | 4088929 | 397645 | 4088317 | Barry/ Newton | 1 |
| 2002 | 3239.00 | Clear Cr. | C | 3.5 | 3.5 | Mi. | Nutrient/Eutrophication Biol. Indicators (W) | Monett WWTP | AQL | LWW, WBC B | 415472 | 4086460 | 410982 | 4088929 | Barry/ Newton | 1 |
| 2002 | 3239.00 | Clear Cr. | C | 3.5 | 3.5 | Mi. | Oxygen, Dissolved (W) | Monett WWTP | AQL | LWW, WBC B | 415472 | 4086460 | 410982 | 4088929 | Barry/ Newton | 1 |
| 2002 | 7326.00 | Clearwater Lake | L2 | 1635.0 | 1635 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, SCR, WBC A | | | 697889 | 4112199 | Reynolds/ Wayne | 1 |
| 2006 | 1706.00 | Coldwater Cr. | C | 5.5 | 5.5 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | IND, LWW, WBC B | 735019 | 4299846 | 741431 | 4301794 | St. Louis | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 1706.00 | Coldwater Cr. | C | 5.5 | 5.5 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, IND, LWW | 735019 | 4299846 | 741431 | 4301794 | St. Louis | 1 |
| 2006 | 1706.00 | Coldwater Cr. | C | 5.5 | 5.5 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | IND, LWW, WBC B | 735019 | 4299846 | 741431 | 4301794 | St. Louis | 1 |
| 2012 | 2177.00 | Coonville Cr. | C | 1.3 | 1.3 | Mi. | Lead (W) | Source Unknown | AQL | LWW, WBC B | 717462 | 4206553 | 717462 | 4206553 | St. Francois | 1 |
| 2006 | 1943.00 | Courtois Cr. | P | 2.6 | 32 | Mi. | Lead (S) | Doe Run Viburnum Division Lead mine | AQL | CLF, LWW, SCR, WBC A | 669877 | 4181454 | 670873 | 4184595 | Washington | 1 |
| 2006 | 1943.00 | Courtois Cr. | P | 2.6 | 32 | Mi. | Zinc (S) | Doe Run Viburnum Division Lead mine | AQL | CLF, LWW, SCR, WBC A | 669877 | 4181454 | 670873 | 4184595 | Washington | 1 |
| 2012 | 2382.00 | Crane Cr. | P | 13.2 | 13.2 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | CDF, LWW, SCR, WBC A | 445954 | 4088238 | 456896 | 4081483 | Stone | 1 |
| 2012 | 2816.00 | Craven Ditch | C | 11.6 | 11.6 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | IRR, LWW | 730992 | 4068607 | 730724 | 4052481 | Butler | 1 |
| 2006 | 1703.00 | Creve Coeur Cr. | C | 2.0 | 2 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, WBC B | 718162 | 4283169 | 718435 | 4287487 | St. Louis | 1 |
| 2006 | 1703.00 | Creve Coeur Cr. | C | 2.0 | 2 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 718162 | 4283169 | 718435 | 4287487 | St. Louis | 1 |
| 2010 | 1703.00 | Creve Coeur Cr. | C | 2.0 | 2 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 718162 | 4283169 | 718435 | 4287487 | St. Louis | 1 |
| 2006 | 1928.00 | Crooked Cr. | P | 3.5 | 3.5 | Mi. | Cadmium (S) | Buick Lead Smelter | AQL | CLF, LWW, WBC A | 662236 | 4174014 | 658207 | 4175647 | Dent/ Crawford | 2 |
| 2006 | 1928.00 | Crooked Cr. | P | 3.5 | 3.5 | Mi. | Cadmium (W) | Buick Lead Smelter | AQL | CLF, LWW, WBC A | 662236 | 4174014 | 658207 | 4175647 | Dent/ Crawford | 1 |
| 2006 | 1928.00 | Crooked Cr. | P | 3.5 | 3.5 | Mi. | Lead (S) | Buick Lead Smelter | AQL | CLF, LWW, WBC A | 662236 | 4174014 | 658207 | 4175647 | Dent/ Crawford | 2 |
| 2008 | 3961.00 | Crooked Cr. | U | 5.2 | n/a | Mi. | Cadmium (W) | Doe Run Buick Lead Smelter | GEN | | 665048 | 4167501 | 662236 | 4174014 | Iron/Dent | 1 |
| 2010 | 3961.00 | Crooked Cr. | U | 5.2 | n/a | Mi. | Copper (W) | Doe Run Buick Lead Smelter | GEN | | 665048 | 4167501 | 662236 | 4174014 | Iron/Dent | 1 |
| 2006 | 2636.00 | Current R. | P | 124.0 | 124 | Mi. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | CLF, IRR, LWW, SCR, WBC A | 628643 | 4137634 | 696828 | 4041495 | Shannon/ Ripley | 1 |
| 2006 | 219.00 | Dardenne Cr. | P1 | 7.0 | 7 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, SCR, WBC B | 709437 | 4300131 | 713752 | 4304230 | St. Charles | 1 |
| 2010 | 221.00 | Dardenne Cr. | P | 15.0 | 15 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, SCR, WBC B | 692521 | 4289823 | 709437 | 4300131 | St. Charles | 1 |
| 2006 | 222.00 | Dardenne Cr. | C | 6.0 | 6 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 683306 | 4288823 | 692521 | 4289823 | St. Charles | 1 |
| 2006 | 690.00 | Dark Cr. | C | 9.1 | 9.1 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 535635 | 4374102 | 531818 | 4365676 | Randolph | 1 |
| 2012 | 3826.00 | Deer Cr. | P | 1.6 | 1.6 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, SCR, WBC B | 732027 | 4276854 | 733742 | 4275819 | St. Louis | 1 |
| 2012 | 3826.00 | Deer Cr. | P | 1.6 | 1.6 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | SCR, WBC B | AQL, LWW, WBC B | 732027 | 4276854 | 733742 | 4275819 | St. Louis | 1 |
| 2002 | 7015.00 | Deer Ridge Lake | L3 | 48.0 | 48 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, SCR, WBC B | 683249 | 4288804 | 692465 | 4289831 | Lewis | 1 |
| 2008 | 36.00 | Des Moines R. | P | 29.0 | 29.0 | Mi. | Escherichia coli (W) | Upstream/Downstream Source | WBC A | AQL, LWW, SCR | 607490 | 4496653 | 633942 | 4471203 | Clark | 1 |
| 2006 | 3109.00 | Ditch # 36 | P | 7 | 7 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 535629 | 4374096 | 531824 | 4365664 | Dunklin | 1 |
| 2006 | 3810.00 | Douger Branch | C | 3.1 | 3.1 | Mi. | Lead (S) | Aurora lead mining district | AQL | LWW | 432992 | 4092650 | 428983 | 4092388 | Lawrence | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 3810.00 | Douger Branch | C | 3.1 | 3.1 | Mi. | Zinc (S) | Aurora lead mining district | AQL | LWW | 432992 | 4092650 | 428983 | 4092388 | Lawrence | 1 |
| 2006 | 1180.00 | Dousinbury Cr. | P | 3.5 | 3.5 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 436409 | 4092394 | 434896 | 4092716 | Dallas | 1 |
| 2012 | 3178.00 | Dry Fork | C | 3.4 | 3.4 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, WBC B | 420021 | 4116472 | 420475 | 4111831 | Lawrence | 1 |
| 2008 | 3189.00 | Dry Fork | C | 10.2 | 10.2 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, LWW | 381619 | 4123453 | 379519 | 4128244 | Jasper | 1 |
| 2012 | 1314.00 | Drywood Cr. | P | 3.8 | 29.9 | Mi. | Total Dissolved Solids (W) | Acid Mine Drainage | AQL | LWW, WBC B | 361695 | 4158073 | 361434 | 4162039 | Barton | 1 |
| 2006 | 3569.00 | Dutro Carter Cr. | P | 0.6 | 1.5 | Mi. | Oxygen, Dissolved (W) | Rolla SE WWTP | AQL | LWW, WBC B | 611958 | 4199021 | 612762 | 4199004 | Phelps | 1 |
| 2010 | 372.00 | East Fk. Crooked R. | P | 14.0 | 14 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 418037 | 4367621 | 423045 | 4349976 | Ray | 1 |
| 2006 | 457.00 | East Fk. Grand R. | P | 25.0 | 25 | Mi | Escherichia coli (W) | Nonpoint Source | WBC A | AQL, DWS, IRR, LWW, SCR | 611959 | 4199047 | 612751 | 4199024 | Worth/ Gentry | 2 |
| 2008 | 608.00 | East Fk. Locust Cr. | P | 13.0 | 13 | Mi | Escherichia coli (W) | Municipal Point Source Discharges, Nonpoint Source | WBC B | AQL, LWW | 610703 | 4198865 | 611959 | 4199047 | Sullivan | 1 |
| 2008 | 610.00 | East Fk. Locust Cr. | C | 0.4 | 13 | Mi | Escherichia coli (W) | Municipal Point Source Discharges, Nonpoint Source | WBC B | AQL, LWW | 490928 | 4451855 | 490792 | 4450898 | Sullivan | 1 |
| 2008 | 610.00 | East Fk. Locust Cr. | C | 12.6 | 13 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 492637 | 4468112 | 490928 | 4451855 | Sullivan | 1 |
| 2008 | 610.00 | East Fk. Locust Cr. | C | 12.6 | 13 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 492637 | 4468112 | 490928 | 4451855 | Sullivan | 1 |
| 2006 | 1282.00 | East Fk. Tebo Cr. | C | 10.4 | 14.5 | Mi. | Oxygen, Dissolved (W) | Windsor SW WWTP | AQL | LWW, WBC B | 453461 | 4263213 | 446903 | 4257226 | Henry | 1 |
| 2006 | 2166.00 | Eaton Branch | C | 0.9 | 1.2 | Mi. | Cadmium (S) | Leadwood tailings pond | AQL | LWW, WBC B | 710950 | 4193696 | 712102 | 4194405 | St. Francois | 1 |
| 2006 | 2166.00 | Eaton Branch | C | 0.9 | 1.2 | Mi. | Cadmium (W) | Leadwood tailings pond | AQL | LWW, WBC B | 710950 | 4193696 | 712102 | 4194405 | St. Francois | 1 |
| 2006 | 2166.00 | Eaton Branch | C | 0.9 | 1.2 | Mi. | Lead (S) | Leadwood tailings pond | AQL | LWW, WBC B | 710950 | 4193696 | 712102 | 4194405 | St. Francois | 1 |
| 2006 | 2166.00 | Eaton Branch | C | 0.9 | 1.2 | Mi. | Zinc (S) | Leadwood tailings pond | AQL | LWW, WBC B | 710950 | 4193696 | 712102 | 4194405 | St. Francois | 1 |
| 2006 | 2166.00 | Eaton Branch | C | 0.9 | 1.2 | Mi. | Zinc (W) | Leadwood tailings pond | AQL | LWW, WBC B | 710950 | 4193696 | 712102 | 4194405 | St. Francois | 1 |
| 2002 | 2593.00 | Eleven Point R. | P | 22.7 | 22.7 | Mi. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | CLF, IRR, LWW, SCR, WBC A | 658817 | 4067447 | 663687 | 4040694 | Oregon | 1 |
| 2006 | 2597.00 | Eleven Point R. | P | 11.4 | 11.4 | Mi. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | CDF, LWW, SCR, WBC A | 648225 | 4073793 | 658817 | 4067447 | Oregon | 1 |
| 2008 | 2601.00 | Eleven Point R. | P | 22.3 | 22.3 | Mi. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | CLF, LWW, SCR, WBC A | 626144 | 4076655 | 648225 | 4073793 | Oregon | 1 |
| 2006 | 1283.00 | Elm Branch | C | 3.0 | 3 | Mi. | Oxygen, Dissolved (W) | Windsor SE WWTP | AQL | LWW, SCR, WBC B | 455777 | 4264032 | 453820 | 4261492 | Henry | 1 |
| 2012 | 1704.00 | Fee Fee (new) Cr. | P | 1.5 | 1.5 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, WBC B | 720606 | 4290497 | 718651 | 4290795 | St. Louis | 1 |
| 2012 | 1704.00 | Fee Fee (new) Cr. | P | 1.5 | 1.5 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 720606 | 4290497 | 718651 | 4290795 | St. Louis | 1 |
| 2012 | 7237.00 | Fellows Lake | L1 | 800.0 | 800 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | DWS, LWW, SCR, WBC A | | | 479590 | 4129881 | Greene | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2012 | 3595.00 | Fenton Cr. | P | 0.5 | 0.5 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 723871 | 4265426 | 724548 | 4265278 | St. Louis | 1 |
| 2012 | 2186.00 | Fishpot Cr. | P | 2.0 | 2 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, WBC B | 715610 | 4270773 | 718141 | 4269480 | St. Louis | 1 |
| 2008 | 2186.00 | Fishpot Cr. | P | 2.0 | 2 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 715610 | 4270773 | 718141 | 4269480 | St. Louis | 1 |
| 2010 | 2168.00 | Flat River Cr. | C | 5.0 | 9 | Mi. | Cadmium (W) | Old Lead Belt tailings | AQL | LWW, WBC B | 717606 | 4190862 | 719851 | 4196761 | St. Francois | 1 |
| 2010 | 7151.00 | Forest Lake | L1 | 573.0 | 573 | Ac. | Chlorophyll-a (W) | Source Unknown | AQL | DWS, LWW, WBC A | | | 529115 | 4446668 | Adair | 1 |
| 2010 | 7151.00 | Forest Lake | L1 | 573.0 | 573 | Ac. | Nitrogen, Total (W) | Source Unknown | AQL | DWS, LWW, WBC A | | | 529115 | 4446668 | Adair | 1 |
| 2010 | 7151.00 | Forest Lake | L1 | 573.0 | 573 | Ac. | Phosphorus, Total (W) | Source Unknown | AQL | DWS, LWW, WBC A | | | 529115 | 4446668 | Adair | 1 |
| 2006 | 747.00 | Fowler Cr. | C | 6 | 6 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 567703 | 4291355 | 568077 | 4285216 | Boone | 1 |
| 2012 | 1842.00 | Fox Cr. | P | 7.2 | 7.2 | Mi. | Cause Unknown (W) | Source Unknown | AQL | LWW, WBC B | 698961 | 4266797 | 702101 | 4258899 | St. Louis | 1 |
| 2008 | 38.00 | Fox R. | P | 42.0 | 42.0 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW, SCR | 591699 | 4495650 | 619878 | 4469909 | Clark | 1 |
| 2010 | 7008.00 | Fox Valley Lake | L3 | 89.0 | 89 | Ac. | Phosphorus, Total (W) | Rural NPS | AQL | LWW, SCR, WBC B | | | 604598 | 4483661 | Clark | 1 |
| 2010 | 7382.00 | Foxboro Lake | L3 | 22.0 | 22 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, SCR, WBC B | | | 644963 | 4249580 | Franklin | 1 |
| 2002 | 7280.00 | Frisco Lake | L3 | 5.0 | 5 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, WBC B | | | 608340 | 4201511 | Phelps | 1 |
| 2012 | 1004.00 | Gans Cr. | C | 5.5 | 5.5 | Mi. | Escherichia coli (W) | Source Unknown | WBC A | AQL, LWW | 562848 | 4305349 | 558293 | 4303466 | Boone | 1 |
| 2002 | 1455.00 | Gasconade R. | P | 249.0 | 249 | Mi. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | CLF, DWS, LWW, SCR, WBC A | 543610 | 4120606 | 626322 | 4281833 | Gasconade/ Wright | 1 |
| 2006 | 2184.00 | Grand Glaize Cr. | C | 4.0 | 4 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, WBC B | 720452 | 4272251 | 721016 | 4270232 | St. Louis | 1 |
| 2010 | 2184.00 | Grand Glaize Cr. | C | 4.0 | 4 | Mi. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, WBC B | 720452 | 4272251 | 721016 | 4270232 | St. Louis | 1 |
| 2002 | 2184.00 | Grand Glaize Cr. | C | 4.0 | 4 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 720452 | 4272251 | 721016 | 4270232 | St. Louis | 1 |
| 2006 | 593.00 | Grand R. | P | 60.0 | 60 | Mi | Escherichia coli (W) | Rural NPS | SCR, WBC B | AQL, DWS, IRR, LWW, WBC A | 454151 | 4399076 | 490791 | 4359355 | Livingston/ Chariton | 1 |
| 2008 | 1712.00 | Gravois Cr. | P | 2.0 | 2 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, WBC B | 735409 | 4269271 | 737738 | 4270157 | St. Louis | 1 |
| 2006 | 1712.00 | Gravois Cr. | P | 2.0 | 2 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 735409 | 4269271 | 737738 | 4270157 | St. Louis | 2 |
| 2006 | 1713.00 | Gravois Cr. | C | 4.0 | 4 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, WBC B | 731092 | 4269825 | 735409 | 4269271 | St. Louis | 1 |
| 2006 | 1713.00 | Gravois Cr. | C | 4.0 | 4 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 731092 | 4269825 | 735409 | 4269271 | St. Louis | 2 |
| 2006 | 1009.00 | Grindstone Cr. | C | 1.5 | 1.5 | Mi. | Escherichia coli (W) | Runoff from Forest/ Grassland/ Parkland, Rural, Residential Areas, Urban Runoff/ Storm Sewers | WBC A | AQL, LWW | 561338 | 4309123 | 558770 | 4308985 | Boone | 1 |
| 2012 | 97.00 | Hays Cr. | C | 2.0 | 2 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, WBC B | 629824 | 4365290 | 630115 | 4368016 | Ralls | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 | 7152.00 | Hazel Creek Lake | L1 | 151.0 | 151 | Ac. | Chlorophyll-a (W) | Rural NPS | AQL | DWS, LWW, WBC B | | | 531549 | 4461110 | Adair | 1 |
| 2008 | 7152.00 | Hazel Creek Lake | L1 | 151.0 | 151 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | DWS, LWW, WBC B | | | 531549 | 4461110 | Adair | 1 |
| 2008 | 848.00 | Heath's Cr. | P | 21.0 | 21.0 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | WBC B, LWW | 481322 | 4306311 | 498371 | 4308099 | Pettis | 1 |
| 2006 | 3226.00 | Hickory Cr. | P | 4.9 | 4.9 | Mi. | Escherichia coli (W) | Source Unknown | WBC A | AQL, LWW | 381771 | 4079318 | 377864 | 4083983 | Newton | 1 |
| 2006 | 1008.00 | Hinkson Cr. | C | 18.0 | 18 | Mi. | Escherichia coli (W) | Urban Runoff/Storm Sewers | WBC B | AQL, LWW, SCR | 567737 | 4324918 | 557336 | 4308968 | Boone | 1 |
| 2012 | 1011.00 | Hominy Br. | C | 1.0 | 1.0 | Mi. | Escherichia coli (W) | Runoff from Forest/ Grassland/ Parkland, Rural, Residential Areas, Urban Runoff/ Storm Sewers | WBC B | AQL, LWW, SCR | 561245 | 4310831 | 560159 | 4310810 | Boone | 1 |
| 2010 | 3169.00 | Honey Cr. | P | 16.5 | 16.5 | Mi. | Escherichia coli (W) | Rural NPS runoff | WBC B | AQL, LWW | 441807 | 4098928 | 423428 | 4103981 | Lawrence | 1 |
| 2010 | 3170.00 | Honey Cr. | C | 2.7 | 2.7 | Mi. | Escherichia coli (W) | Rural NPS runoff | WBC B | AQL, LWW | 443604 | 4095825 | 441807 | 4098928 | Lawrence | 1 |
| 2008 | 1348.00 | Horse Cr. | P | 27.7 | 27.7 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | IRR, LWW, WBC B | 404906 | 4166886 | 422140 | 4180187 | Cedar | 1 |
| 2010 | 1348.00 | Horse Cr. | P | 27.7 | 27.7 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | IRR, LWW, WBC B | 404906 | 4166886 | 422140 | 4180187 | Cedar | 1 |
| 2002 | 7388.00 | Hough Park Lake | L3 | 7.0 | 7 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, WBC B | | | 571190 | 4266070 | Cole | 1 |
| 2012 | 7029.00 | Hunnewell Lake | L3 | 228.0 | 228 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, SCR, WBC B | | | 597510 | 4395781 | Shelby | 1 |
| 2010 | 420.00 | Indian Cr. | C | 3.0 | 3 | Mi. | Chloride (W) | Road/Bridge Runoff, Non-construction | AQL | IND, LWW, WBC A | 360619 | 4311181 | 364589 | 4312667 | Jackson | 1 |
| 2002 | 420.00 | Indian Cr. | C | 3.0 | 3 | Mi. | Escherichia coli (W) | Leawood, KS WWTP, Urban Runoff/ Storm Sewers | WBC A | AQL, IND, LWW | 360619 | 4311181 | 364589 | 4312667 | Jackson | 1 |
| 2012 | 1946.00 | Indian Cr. | P | 1.9 | 1.9 | Mi. | Lead (S) | Doe Run Viburnum Division Lead mine | AQL | LWW, WBC B | 668795 | 4178900 | 669877 | 4181454 | Washington | 1 |
| 2012 | 1946.00 | Indian Cr. | P | 1.9 | 1.9 | Mi. | Zinc (S) | Doe Run Viburnum Division Lead mine | AQL | LWW, WBC B | 668795 | 4178900 | 669877 | 4181454 | Washington | 1 |
| 2006 | 3256.00 | Indian Cr. | P | 9.7 | 30.8 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, CLF, IRR, LWW, SCR | 390079 | 4072820 | 959 | 4065146 | Newton/ McDonald | 1 |
| 2008 | 7389.00 | Indian Creek Lake | L3 | 192.0 | 192 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, SCR, WBC B | | | 440543 | 4416535 | Livingston | 1 |
| 2012 | 3223.00 | Jacobs Br. | P | 1.6 | 1.6 | Mi. | Zinc (W) | Tri-State Mining District | AQL | LWW, WBC B | 365485 | 4095649 | 365847 | 4097350 | Newton | 1 |
| 2012 | 3207.00 | Jenkins Cr. | P | 2.8 | 2.8 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, LWW | 389301 | 4103154 | 386214 | 4105402 | Newton/ Jasper | 1 |
| 2012 | 3205.00 | Jones Cr. | P | 7.5 | 7.5 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, CLF, LWW | 388098 | 4099356 | 383685 | 4107345 | Newton/ Jasper | 1 |
| 2012 | 3592.00 | Kiefer Cr. | P | 1.2 | 1.2 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, WBC B | 713477 | 4270033 | 714872 | 4269554 | St. Louis | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 | 3592.00 | Kiefer Cr. | P | 1.2 | 1.2 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 713477 | 4270033 | 714872 | 4269554 | St. Louis | 1 |
| 2002 | 7196.00 | Knob Knoster St. Park Lakes** | L3 | 10.0 | 10 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, WBC B | | | 449403 | 4289099 | Johnson | 1 |
| 2012 | 2171.00 | Koen Cr. | C | 1.0 | 1 | Mi. | Fish Bioassessments | Source Unknown | AQL | LWW | 720083 | 4193036 | 719754 | 4194279 | St. Francois | 1 |
| 2002 | 7436.00 | Lake of the Woods | L3 | 3.0 | 3 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, WBC B | | | 565549 | 4314857 | Boone | 1 |
| 2008 | 7629.00 | Lake of the Woods | U | 7.0 | 7 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | GEN | | 368609 | 4317228 | 368318 | 4317421 | Jackson | 1 |
| 2010 | 7054.00 | Lake St. Louis | L3 | 525.0 | 525 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | WBC B, LWW | | | 694070 | 4297116 | St. Charles | 1 |
| 2010 | 7212 | Lake Winnebago | L3 | 350.0 | 350 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, SCR, WBC A | | | 382262 | 4297476 | Cass | 1 |
| 2006 | 847.00 | Lamine R. | P | 54.0 | 54 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, IRR, LWW, SCR | 504057 | 4279960 | 513000 | 4314568 | Morgan/ Cooper | 1 |
| 1998 | 3105.00 | Lat. #2 Main Ditch | P | 11.5 | 11.5 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 774308 | 4075742 | 773631 | 4058057 | Stoddard | 2 |
| 2008 | 3105.00 | Lat. #2 Main Ditch | P | 11.5 | 11.5 | Mi. | Temperature, water (W) | Channelization | AQL | LWW, WBC B | 774308 | 4075742 | 773631 | 4058057 | Stoddard | 1 |
| 2012 | 3137.00 | Lee Rowe Ditch | C | 2.3 | 6 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 824374 | 4076890 | 823414 | 4073568 | Mississippi | 1 |
| 2002 | 7020.00 | Lewistown Lake | L1 | 29.0 | 29 | Ac. | Atrazine (W) | Agriculture | DWS | AQL | | | 600674 | 4439277 | Lewis | 3 |
| 2012 | 3575.00 | Line Cr. | C | 7.0 | 7 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 358974 | 4343374 | 360136 | 4335565 | Platte | 1 |
| 2008 | 1529.00 | Little Beaver Cr. | C | 3.4 | 3.5 | Mi. | Sedimentation/Siltation (S) | Smith Sand and Gravel | AQL | LWW, WBC A | 602344 | 4199334 | 600304 | 4195833 | Phelps | 1 |
| 2012 | 422.00 | Little Blue R. | P | 35.1 | 35.1 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW, SCR | 372712 | 4309261 | 394909 | 4340608 | Jackson | 1 |
| 2012 | 1003.00 | Little Bonne Femme Cr. | P | 9.0 | 9 | Mi. | Escherichia coli (W) | Source Unknown | WBC B | AQL, LWW | 558293 | 4303466 | 553350 | 4296764 | Boone | 1 |
| 2006 | 1863.00 | Little Dry Fk. | P | 1.0 | 5 | Mi. | Oxygen, Dissolved (W) | Rolla SE WWTP | AQL | LWW, SCR, WBC B | 613259 | 4199799 | 616764 | 4199780 | Phelps | 1 |
| 2006 | 1864.00 | Little Dry Fk. | C | 0.6 | 4.5 | Mi. | Oxygen, Dissolved (W) | Rolla SE WWTP | AQL | LWW, WBC B | 612762 | 4199004 | 613259 | 4199799 | Phelps | 1 |
| 2008 | 1864.00 | Little Dry Fk. | C | 3.9 | 4.5 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 612998 | 4192820 | 612762 | 4199004 | Phelps | 1 |
| 2006 | 1325.00 | Little Drywood Cr. | P | 17 | 17 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 377089 | 4173190 | 376737 | 4191485 | Vernon | 1 |
| 2010 | 1326.00 | Little Drywood Cr. | C | 10.0 | 10 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 379795 | 4162807 | 377089 | 4173190 | Barton/ Vernon | 1 |
| 2010 | 3279.00 | Little Lost Cr. | P | 5.8 | 5.8 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 362557 | 4080611 | 355721 | 4078287 | Newton | 1 |
| 2006 | 623.00 | Little Medicine Cr. | P | 40.0 | 40 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, WBC B | 416142 | 4124179 | 399901 | 4114249 | Mercer/ Grundy | 1 |
| 2006 | 623.00 | Little Medicine Cr. | P | 20.0 | 40 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 421758 | 4107283 | 420784 | 4107591 | Mercer/ Grundy | 1 |
| 2006 | 1189.00 | Little Niangua R. | P | 20.0 | 43 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | CLF, LWW, SCR, WBC A | 499879 | 4188131 | 491897 | 4206840 | Dallas/ Camden | 1 |
| 2008 | 3652.00 | Little Osage R. | C | 16.0 | 16 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 358275 | 4206134 | 378073 | 4204993 | Vernon | 2 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2012 | 2229.00 | Little Whitewater R. | P | 24.2 | 24.2 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, WBC A | 759232 | 4159953 | 782131 | 4144237 | Cape Girardeau/ Bollinger | 1 |
| 2006 | 606.00 | Locust Cr. | P | 36.4 | 84 | Mi. | Escherichia coli (W) | Rural NPS | SCR, WBC B | AQL, DWS, LWW, WBC B | 488070 | 4492450 | 485919 | 4450776 | Putnam/ Sullivan | 1 |
| 2012 | 2763.00 | Logan Cr. | P | 6.1 | 36.0 | Mi. | Lead (S) | Sweetwater Lead Mine/Mill | AQL | LWW, SCR, WBC A | 666290 | 4135270 | 666157 | 4127465 | Reynolds | 1 |
| 2006 | 696.00 | Long Branch Cr. | C | 2.0 | 13 | Mi. | Oxygen, Dissolved (W) | Atlanta WWTP | AQL | LWW, SCR, WBC B | 543322 | 4416540 | 543714 | 4413999 | Macon | 1 |
| 2002 | 7097.00 | Longview Lake | L2 | 930.0 | 930 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, SCR, WBC A | 370767 | 4304559 | 372708 | 4309235 | Jackson | 1 |
| 2006 | 3278.00 | Lost Cr. | P | 8.5 | 8.5 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, CLF, LWW, SCR | 365734 | 4083852 | 355708 | 4078281 | Newton | 1 |
| 2006 | 2814.00 | Main Ditch | C | 13.0 | 13.0 | Mi. | pH (W) | Poplar Bluff WWTP | AQL | IRR, LWW, WBC B | 732515 | 4068032 | 728380 | 4048616 | Butler | 1 |
| 2006 | 2814.00 | Main Ditch | C | 13.0 | 13.0 | Mi. | Temperature, water (W) | Channelization | AQL | IRR, LWW, WBC B | 732515 | 4068032 | 728380 | 4048616 | Butler | 1 |
| 2012 | 1709.00 | Maline Cr. | C | 0.6 | 0.6 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, SCR, WBC B | 741092 | 4291205 | 741520 | 4290480 | St. Louis | 1 |
| 2012 | 1709.00 | Maline Cr. | C | 0.6 | 0.6 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | SCR, WBC B | AQL, LWW, WBC B | 741092 | 4291205 | 741520 | 4290480 | St. Louis | 1 |
| 2012 | 3839.00 | Maline Cr. | C | 0.5 | 0.5 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, SCR | 741520 | 4290480 | 742148 | 4290141 | St. Louis | 1 |
| 2012 | 3839.00 | Maline Cr. | C | 0.5 | 0.5 | Mi. | pH (W) | Source Unknown | AQL | LWW, SCR | 741520 | 4290480 | 742148 | 4290141 | St. Louis | 1 |
| 2010 | 3140.00 | Maple Slough Ditch | C | 16.0 | 16 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 820642 | 4090485 | 816884 | 4062825 | Mississippi/ New Madrid | 1 |
| 2002 | 7033.00 | Mark Twain Lake | L2 | 18600.0 | 18600 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | DWS, LWW, SCR, WBC A | 591225 | 4370593 | 616549 | 4375850 | Monroe/ Ralls | 1 |
| 2006 | 619.00 | Medicine Cr. | P | 36.0 | 36 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 490930 | 4451871 | 490963 | 4451293 | Putnam/ Grundy | 1 |
| 2010 | 2183.00 | Meramec R. | P | 22.0 | 22 | Mi. | Escherichia coli (W) | Municipal Point Source Discharges, Nonpoint Source | WBC A | AQL, DWS, IND, LWW, SCR | 718259 | 4269400 | 731938 | 4252474 | St. Louis | 1 |
| 2008 | 2183.00 | Meramec R. | P | 22.0 | 22 | Mi. | Lead (S) | Old Lead belt tailings | AQL | DWS, IND, LWW, SCR, WBC A | 718259 | 4269400 | 731938 | 4252474 | St. Louis | 1 |
| 2008 | 2185.00 | Meramec R. | P | 15.7 | 26 | Mi. | Lead (S) | Old Lead Belt tailings | AQL | CLF, DWS, IND, LWW, SCR, WBC A | 707844 | 4260833 | 718259 | 4269400 | St. Louis | 1 |
| 1994 | 1299.00 | Miami Cr. | P | 18 | 18 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 373089 | 4239543 | 382984 | 4222768 | Bates | 1 |
| 2012 | 2744.00 | Middle Fk. Black R. | P | 2.5 | 21 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Buick Lead Mine/Mill | AQL | CLF, LWW, WBC A | 680284 | 4163599 | 682139 | 4161326 | Reynolds | 1 |
| 2006 | 468.00 | Middle Fk. Grand R. | P | 25.0 | 25 | Mi | Escherichia coli (W) | Rural NPS | WBC A | AQL, IRR, LWW, SCR | 385583 | 4488594 | 381780 | 4452480 | Worth/ Gentry | 1 |
| 2010 | 3262.00 | Middle Indian Cr. | C | 3.5 | 3.5 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, WBC B | 400092 | 4074869 | 395454 | 4074061 | Newton | 1 |
| 2010 | 3263.00 | Middle Indian Cr. | P | 2.2 | 2.2 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 395454 | 4074061 | 392652 | 4075387 | Newton | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 3263.00 | Middle Indian Cr. | P | 2.2 | 2.2 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, WBC B | 395462 | 4074067 | 392653 | 4075386 | Newton | 1 |
| 2010 | 226.00 | Missouri R. | P | 179.0 | 179 | Mi. | Escherichia coli (W) | Mult. Pt.& NPS | SCR, WBC B | AQL, DWS, IND, IRR, LWW, WBC B | 265813 | 4496304 | 360959 | 4330925 | Atchison/ Jackson | 1 |
| 2012 | 356.00 | Missouri R. | P | 129.0 | 129 | Mi. | Escherichia coli (W) | Mult. Pt.& NPS | SCR, WBC B | AQL, DWS, IND, IRR, LWW, WBC B | 360959 | 4330925 | 503506 | 4351395 | Jackson/ Saline | 1 |
| 2008 | 1604.00 | Missouri R. | P | 100.0 | 100 | Mi. | Escherichia coli (W) | Mult. Pt.& NPS | WBC B | AQL, DWS, IND, IRR, LWW, SCR | 626315 | 4281840 | 749978 | 4300141 | Gasconade/ St. Charles | 1 |
| 2010 | 7402.00 | Mozingo Lake | L1 | 1000.0 | 1000 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | DWS, LWW, SCR, WBC B, GEN | | | 348772 | 4467994 | Nodaway | 1 |
| 2006 | 853.00 | Muddy Cr. | P | 1.8 | 1.8 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, WBC B | 475958 | 4289290 | 476153 | 4291478 | Pettis | 1 |
| 2008 | 853.00 | Muddy Cr. | P | 62.2 | 62.2 | Mi. | Chloride (W) | Sedalia Central WWTP | AQL | LWW, WBC B | 458158 | 4281745 | 495118 | 4299761 | Pettis | 1 |
| 2006 | 674.00 | Mussel Fork Cr. | C | 29.0 | 29 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, DWS, LWW | 509540 | 4450629 | 513876 | 4410414 | Sullivan/ Macon | 1 |
| 2006 | 1170.00 | Niangua R. | P | 51.0 | 51 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, CLF, LWW, SCR | 507120 | 4144342 | 512204 | 4176323 | Webster/ Dallas | 1 |
| 2006 | 550.00 | No Cr. | P | 22.5 | 22.5 | Mi | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 461943 | 4447521 | 451265 | 4415426 | Grundy/ Livingston | 1 |
| 2010 | 550.00 | No Cr. | P | 22.5 | 22.5 | Mi | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 461943 | 4447521 | 451265 | 4415426 | Grundy/ Livingston | 1 |
| 2002 | 7316.00 | Noblett Lake | L3 | 26.0 | 26 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, WBC A | | | 579891 | 4085042 | Douglas | 1 |
| 2010 | 279.00 | Nodaway R. | P | 60.0 | 60 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, IRR, LWW, SCR | 328881 | 4493644 | 331843 | 4418710 | Nodaway | 1 |
| 2010 | 7109.00 | North Bethany Lake | L3 | 78.0 | 78 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, SCR, WBC A | | | 412397 | 4463019 | Harrison | 1 |
| 2006 | 170.00 | North Fk. Cuivre R. | C | 8 | 8 | Mi. | Fecal Coliform (W) | Source Unknown | WBC B | AQL, LWW | 651684 | 4345260 | 656761 | 4337088 | Pike | 1 |
| 2006 | 170.00 | North Fk. Cuivre R. | C | 8 | 8 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 651684 | 4345260 | 656761 | 4337088 | Pike | 1 |
| 2008 | 3186.00 | North Fk. Spring R. | P | 17.4 | 17.4 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW, SCR | 379528 | 4128246 | 363876 | 4125768 | Barton | 1 |
| 2006 | 3188.00 | North Fk. Spring R. | C | 1.1 | 55.9 | Mi. | Ammonia, Total (W) | Lamar WWTP | AQL | LWW, SCR, WBC B | 385711 | 4149177 | 387025 | 4148244 | Barton | 1 |
| 2008 | 3188.00 | North Fk. Spring R. | C | 55.9 | 55.9 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW, SCR | 408711 | 4131507 | 379528 | 4128246 | Dade/Jasper | 1 |
| 2006 | 3188.00 | North Fk. Spring R. | C | 55.9 | 55.9 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, SCR, WBC B | 408711 | 4131507 | 379528 | 4128246 | Dade/Jasper | 1 |
| 2008 | 3260.00 | North Indian Cr. | P | 5.2 | 5.2 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, WBC B | 395484 | 4077534 | 390079 | 4072820 | Newton | 1 |
| 2008 | 3260.00 | North Indian Cr. | P | 5.0 | 5 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 395484 | 4077534 | 390079 | 4072820 | Newton | 1 |
| 2010 | 1293.00 | Osage R. | P | 39.3 | 39.3 | Mi. | Oxygen, Dissolved (W) | Source Unknown | *** | *** | 453701 | 4183192 | 444285 | 4187603 | Vernon/St. Clair | 1 |
| 2006 | 1373.00 | Panther Cr. | C | 7.8 | 7.8 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 482169 | 4115647 | 482554 | 4113028 | St. Clair/ Polk | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 2373.00 | Pearson Cr. | P | 8.0 | 8 | Mi. | Escherichia coli (W) | Livestock,Grazing or Feeding Operations, Urban Runoff/Storm Sewers | WBC A | AQL, LWW | 486616 | 4121330 | 482572 | 4113046 | Greene | 1 |
| 2008 | 7628 | Perry Phillips Lake | U | 32.0 | 32 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | GEN | | | | 561277 | 4305658 | Boone | 1 |
| 2012 | 215.00 | Peruque Cr. | P1 | 9.6 | 9.6 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, SCR, WBC B | 700330 | 4301725 | 704083 | 4307876 | St. Charles | 1 |
| 2012 | 216.00 | Peruque Cr. | P | 0.3 | 10.3 | Mi. | Cause Unknown (W) | Lake St. Louis Dam | AQL | LWW, SCR, WBC B | 693935 | 4297184 | 694195 | 4297616 | St. Charles | 1 |
| 2006 | 1755.00 | Pickle Cr. | P | 7.0 | 7 | Mi. | pH (W) | Atmospheric Deposition - Acidity | AQL | LWW, WBC B | 731000 | 4068596 | 732525 | 4068037 | Ste. Genevieve | 1 |
| 2010 | 2815.00 | Pike Cr. | C | 6.0 | 6.0 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | IRR, LWW | 727565 | 4074153 | 732501 | 4058040 | Butler | 1 |
| 2010 | 312.00 | Platte R. | P | 138.0 | 138 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, DWS, IRR, LWW, SCR | | | 471911 | 4194812 | Worth/Platte | 1 |
| 2012 | 1327 | Pleasant Run Cr. | C | 7.6 | 7.6 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 381361 | 4169526 | 376904 | 4174683 | Vernon | 1 |
| 2006 | 3120.00 | Pole Cat Slough | P | 12 | 12 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 599821 | 4447806 | 599813 | 4448472 | Dunklin | 1 |
| 2006 | 2038.00 | Red Oak Cr. | C | 10.0 | 10 | Mi. | Oxygen, Dissolved (W) | Owensville WWTP | AQL | LWW, WBC B | 631421 | 4239857 | 642012 | 4246718 | Gasconade | 1 |
| 2006 | 1710.00 | River des Peres | C | 2.6 | 2.6 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, SCR | 736570 | 4271519 | 738742 | 4268522 | St. Louis | 1,4 |
| 2012 | 1710.00 | River des Peres | C | 2.6 | 2.6 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | SCR | AQL, LWW | 736570 | 4271519 | 738742 | 4268522 | St. Louis | 1,4 |
| 2012 | 3827.00 | River des Peres | P | 3.7 | 3.7 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, SCR | 733742 | 4275819 | 736561 | 4271521 | St. Louis | 1,5 |
| 2012 | 3827.00 | River des Peres | P | 3.7 | 3.7 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | SCR | AQL, LWW | 733742 | 4275819 | 736561 | 4271521 | St. Louis | 1,5 |
| 2010 | 594.00 | Salt Cr. | C | 14.0 | 14.0 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 608375 | 4201573 | 608199 | 4201593 | Livingston/ Chariton | 1 |
| 2012 | 2113.00 | Salt Pine Creek | C | 1.2 | 1.2 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Barite tailings pond | AQL | LWW, WBC B | 698660 | 4214456 | 697844 | 2216040 | St. Francois | 1 |
| 2008 | 91.00 | Salt R. | P | 29.0 | 29 | Mi. | Oxygen, Dissolved (W) | Mark Twain Lake re-regulation dam | AQL | DWS, IRR, LWW, SCR, WBC A | 703641 | 4150936 | 704394 | 4150521 | Ralls/Pike | 1 |
| 2002 | 103.00 | Salt R. | P1 | 9.3 | 9.3 | Mi. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | DWS, IRR, LWW, SCR, WBC A | 616571 | 4375863 | 622770 | 4380468 | Ralls | 1,6 |
| 2006 | 2170.00 | Shaw Branch | C | 2.0 | 2 | Mi. | Cadmium (S) | Federal tailings pond | AQL | LWW, WBC B | 718516 | 4190248 | 718461 | 4191840 | St. Francois | 1 |
| 2008 | 3222.00 | Shoal Cr. | P | 41.1 | 41.1 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, CLF, DWS, IND, IRR, LWW, SCR | 402084 | 4083441 | 356113 | 4099770 | Newton | 1 |
| 2006 | 399.00 | Sni-a-bar Cr. | P | 32 | 32 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, SCR, WBC B | 398862 | 4311016 | 416458 | 4333099 | Jackson/ Lafayette | 1 |
| 2006 | 655.00 | South Blackbird Cr. | C | 5 | 13 | Mi. | Ammonia, Un-ionized (W) | Source Unknown | AQL | LWW, WBC B | 503697 | 4475340 | 518720 | 4469744 | Putnam | 2 |
| 2010 | 71.00 | South Fabius R. | P | 80.6 | 80.6 | Mi. | Escherichia coli (W) | Nonpoint Source | WBC B | AQL, IRR, LWW | 572794 | 4444457 | 627750 | 4417637 | Knox/Marion | 1 |
| 1994 | 142.00 | South Fk. Salt R. | C | 20.1 | 32 | Mi. | Oxygen, Dissolved (W) | Mexico WWTP, Source Unknown | AQL | LWW, SCR, WBC B | 420412 | 4108671 | 356381 | 4117687 | Callaway/ Audrain | 1 |
| 2006 | 1249.00 | South Grand R. | P | 62.5 | 62.5 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW, SCR | 425548 | 4101756 | 420412 | 4108671 | Cass/Henry | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2012 | 3259.00 | South Indian Cr. | P | 8.7 | 8.7 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | CDF, LWW, WBC B | 399208 | 4067538 | 390081 | 4072821 | McDonald/ Newton | 1 |
| 2008 | 3259.00 | South Indian Cr. | P | 8.7 | 8.7 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, CDF, LWW | 399215 | 4067527 | 390079 | 4072820 | Newton/ McDonald | 1 |
| 2012 | 224.00 | Spencer Cr. | C | 1.5 | 1.5 | Mi. | Chloride (W) | St. Peters WWTP, Urban Runoff/ Storm Sewers | AQL | LWW | 708197 | 4298108 | 709436 | 4300127 | St. Charles | 1 |
| 2006 | 3160.00 | Spring R. | C | 61.7 | 61.7 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, CLF, IND, IRR, LWW, SCR | 420404 | 4108681 | 356391 | 4117697 | Lawrence/ Jasper | 1 |
| 2010 | 3164.00 | Spring R. | P | 8.8 | 8.8 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, CDF, IND, IRR, LWW, SCR | 425938 | 4100912 | 420404 | 4108681 | Lawrence | 1 |
| 2010 | 3165.00 | Spring R. | P | 11.9 | 11.9 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, LWW, SCR | 430995 | 4088419 | 425938 | 4100912 | Lawrence | 1 |
| 2012 | 2835.00 | St. Francis R. | P | 8.4 | 93.1 | Mi. | Temperature, water (W) | Source Unknown | CLF | AQL, IRR, LWW, SCR, WBC A | 725328 | 4181265 | 728433 | 4173620 | St. Francois | 1 |
| 2006 | 3138.00 | St. John's Ditch | P | 15.3 | 15.3 | Mi. | Escherichia coli (W) | Rural NPS, Urban Runoff/Storm Sewers | WBC B | AQL, LWW, SCR | 807942 | 4079151 | 817829 | 4057594 | New Madrid | 1 |
| 2006 | 3138.00 | St. John's Ditch | P | 15.3 | 15.3 | Mi. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, SCR, WBC B | 807942 | 4079151 | 817829 | 4057594 | New Madrid | 1 |
| 2006 | 3135.00 | Stevenson Bayou | C | 14 | 14 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 513037 | 4255157 | 513136 | 4258619 | Mississippi | 1 |
| 2006 | 959.00 | Straight Fk. | C | 2.5 | 6 | Mi. | Oxygen, Dissolved (W) | Versailles WWTP | AQL | LWW, WBC B | 513047 | 4255147 | 514144 | 4263031 | Morgan | 1 |
| 2008 | 2751.00 | Strother Cr. | P | 6.0 | 6.0 | Mi. | Lead (S) | Buick Lead Mine/Mill | AQL | CLF, LWW, WBC B | 672405 | 4162651 | 680284 | 4163599 | Iron | 1 |
| 2010 | 2751.00 | Strother Cr. | P | 6.0 | 6.0 | Mi. | Lead (W) | Buick Lead Mine/Mill | AQL | CLF, LWW, WBC B | 672405 | 4162651 | 680284 | 4163599 | Iron | 1 |
| 2008 | 2751.00 | Strother Cr. | P | 6.0 | 6.0 | Mi. | Nickel (S) | Buick Lead Mine/Mill | AQL | CLF, LWW, WBC B | 672405 | 4162651 | 680284 | 4163599 | Iron | 1 |
| 2006 | 2751.00 | Strother Cr. | P | 6.0 | 6.0 | Mi. | Zinc (S) | Buick Lead Mine/Mill | AQL | CLF, LWW, WBC B | 672405 | 4162651 | 680284 | 4163599 | Iron | 1 |
| 2010 | 2751.00 | Strother Cr. | P | 6.0 | 6.0 | Mi. | Zinc (W) | Buick Lead Mine/Mill | AQL | CLF, LWW, WBC B | 672405 | 4162651 | 680284 | 4163599 | Iron | 1 |
| 2008 | 3965.00 | Strother Cr. | U | 0.9 | n/a | Mi. | Arsenic (S) | Buick Lead Mine/Mill | GEN | | 671138 | 4161740 | 672405 | 4162651 | Reynolds/ Iron | 1 |
| 2008 | 3965.00 | Strother Cr. | U | 0.9 | n/a | Mi. | Lead (S) | Buick Lead Mine/Mill | GEN | | 671138 | 4161740 | 672405 | 4162651 | Reynolds/ Iron | 1 |
| 2008 | 3965.00 | Strother Cr. | U | 0.9 | n/a | Mi. | Nickel (S) | Buick Lead Mine/Mill | GEN | | 671138 | 4161740 | 672405 | 4162651 | Reynolds/ Iron | 1 |
| 2006 | 3965.00 | Strother Cr. | U | 0.9 | n/a | Mi. | Zinc (S) | Buick Lead Mine/Mill | GEN | | 671138 | 4161740 | 672405 | 4162651 | Reynolds/ Iron | 1 |
| 2012 | 3965.00 | Strother Cr. | U | 0.9 | n/a | Mi. | Zinc (W) | Buick Lead Mine/Mill | GEN | | 671138 | 4161740 | 672405 | 4162651 | Reynolds/ Iron | 1 |
| 2006 | 686.00 | Sugar Cr. | P | 6.8 | 6.8 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 544663 | 4369674 | 538226 | 4368067 | Randolph | 1 |
| 2006 | 7399.00 | Sunset Lake | L3 | 6.0 | 6 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, WBC B | | | 569912 | 4268414 | Cole | 1 |
| 2010 | 7313.00 | Table Rock Lake, White River Arm | L2 | 17240.0 | 17240 | Ac. | Chlorophyll (W) | Mult. Pt.& NPS | AQL | WBC A,LWW,SCR | | | 472162 | 4050084 | Barry/Taney | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 | 7313.00 | Table Rock Lake, White River Arm | L2 | 17240.0 | 17240 | Ac. | Nitrogen (W) | Mult. Pt.& NPS | AQL | WBC A,LWW,SCR | | | 472162 | 4050084 | Barry/Taney | 1 |
| 2002 | 7313.00 | Table Rock Lake, James, Kings and Long Cr. Arms | L2 | 24507.0 | 24507 | Ac. | Nutrient/Eutrophication Biol. Indicators (W) | Mult. Pt.& NPS | AQL | WBC A,LWW,SCR | | | | | Barry/ Taney/Stone | 2 |
| 2010 | 7297.00 | Terre Du Lac Lakes **** | L3 | 103.0 | 103 | Ac. | Chlorophyll-a (W) | Terre du Lac Subdivision | AQL | LWW, SCR, WBC A | | | 708556 | 4197147 | St. Francois | 1 |
| 2010 | 7297.00 | Terre Du Lac Lakes **** | L3 | 103.0 | 103 | Ac. | Nitrogen, Total (W) | Terre du Lac Subdivision | AQL | LWW, SCR, WBC A | | | 708556 | 4197147 | St. Francois | 1 |
| 2008 | 549.00 | Thompson R. | P | 5.0 | 65 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, DWS, IRR, LWW | 432197 | 4492099 | 430910 | 4488381 | Harrison | 1 |
| 2012 | 3243.00 | Thurman Cr. | P | 3.0 | 3 | Mi. | Escherichia coli (W) | Rural and suburban NPS | WBC B | AQL, LWW, | 369320 | 4099003 | 367466 | 4097251 | Newton | 1 |
| 2012 | 3763.00 | Tiff Cr. | P | 2.1 | 2.1 | Mi. | Fishes Bioassessments (W) | Source Unknown | AQL | LWW, WBC B | 710827 | 4212454 | 708999 | 4214898 | Jefferson | 1 |
| 2006 | 1225.00 | Trib. To Big Otter Cr. | C | 1.0 | 1 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 437064 | 4228845 | 436283 | 4229898 | Henry | 1 |
| 2012 | 3963.00 | Trib. To Chat Cr. | U | 0.9 | 0.9 | Mi. | Cadmium (W) | Baldwin Park mine | GEN | | 437568 | 4092534 | 436376 | 4092428 | Lawrence | 1 |
| 2010 | 3963.00 | Trib. To Chat Cr. | U | 0.9 | 0.9 | Mi. | Zinc (W) | Baldwin Park mine | GEN | | 437568 | 4092534 | 436376 | 4092428 | Lawrence | 1 |
| 2010 | 133.00 | Trib. To Coon Cr. | C | 1.0 | 1 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 552191 | 4364085 | 554306 | 4364133 | Randolph | 2 |
| 2010 | 3938.00 | Trib. To Flat River Cr. | U | 0.3 | 0.3 | Mi. | Zinc (W) | Mill tailings (Aban.) | AQL | | 717159 | 4191123 | 717606 | 4190862 | St. Francois | 1 |
| 2008 | 3943.00 | Trib. To Foster Br. | U | 0.7 | 2.0 | Mi. | Ammonia, Un-ionized (W) | Ashland WWTP | GEN | | 564699 | 4290776 | 656255 | 4290007 | Boone | 1 |
| 2010 | 1420.00 | Trib. To Goose Cr. | C | 3.0 | 3.0 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 437632 | 4110212 | 440716 | 4112975 | Lawrence | 1 |
| 2006 | 3490.00 | Trib. To Little Muddy Cr. | C | 1.0 | 1.0 | Mi. | Chloride (W) | Tyson Foods | AQL | LWW, WBC B | 473619 | 4290956 | 474708 | 4291636 | Pettis | 1 |
| 2010 | 2114.00 | Trib. To Old Mines Cr. | C | 1.5 | 1.5 | Mi. | Sedimentation/Siltation (S) | Barite tailings pond | GEN | AQL, LWW, WBC B | 699698 | 4215167 | 698464 | 4216954 | St. Francois | 1 |
| 2006 | 3360.00 | Trib. To Red Oak Cr. | C | 0.5 | 0.5 | Mi. | Oxygen, Dissolved (W) | Owensville WWTP | AQL | LWW, WBC B | 635584 | 4245145 | 636294 | 4244763 | Gasconade | 1 |
| 2006 | 3361.00 | Trib. To Red Oak Cr. | C | 1.1 | 1.9 | Mi. | Oxygen, Dissolved (W) | Nonpoint Source | AQL | LWW | 632991 | 4245779 | 634496 | 4245415 | Gasconade | 1 |
| 2006 | 3361.00 | Trib. To Red Oak Cr. | C | 0.8 | 1.9 | Mi. | Oxygen, Dissolved (W) | Owensville WWTP | AQL | LWW | 634496 | 4245415 | 635584 | 4245145 | Gasconade | 1 |
| 2006 | 956.00 | Trib. To Willow Fk. | C | 0.5 | 0.5 | Mi. | Low D.O. (W) | Unknown | AQL | LWW | 520023 | 4276037 | 520579 | 4275437 | Moniteau | 1 |
| 2006 | 3589.00 | Trib. To Wolf Cr. | C | 1.5 | 1.5 | Mi. | Low D.O. (W) | Unknown | AQL | LWW, WBC B | 727179 | 4185393 | 729121 | 4184286 | St. Francois | 2 |
| 2006 | 74.00 | Troublesome Cr. | C | 6.1 | 41.3 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, SCR, WBC B | 366140 | 4107715 | 586188 | 4437669 | Knox | 1 |
| 2006 | 74.00 | Troublesome Cr. | C | 35.3 | 41.3 | Mi. | Unknown | Unknown | AQL | WBC B,LWW | 586188 | 4437669 | 356267 | 4109953 | Knox/Marion | 1 |
| 2012 | 751.00 | Turkey Cr. | C | 6.3 | 6.3 | Mi | Escherichia coli (W) | Source Unknown | WBC A | AQL, LWW | 565466 | 4300840 | 560347 | 4298778 | Boone | 1 |
| 2006 | 3216.00 | Turkey Cr. | P | 7.7 | 7.7 | Mi. | Cadmium (S) | Tri-State Mining District | AQL | LWW, WBC B | 366127 | 4107718 | 356268 | 4109958 | Jasper | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 3216.00 | Turkey Cr. | P | 7.7 | 7.7 | Mi. | Cadmium (W) | Tri-State Mining District | AQL | LWW, WBC B | 366127 | 4107718 | 356268 | 4109958 | Jasper | 1 |
| 2006 | 3216.00 | Turkey Cr. | P | 7.7 | 7.7 | Mi. | Escherichia coli (W) | Rural and suburban NPS | WBC B | AQL, LWW | 366127 | 4107718 | 356268 | 4109958 | Jasper | 1 |
| 2008 | 3216.00 | Turkey Cr. | P | 7.7 | 7.7 | Mi. | Lead (S) | Tri-State Mining District | AQL | LWW, WBC B | 366127 | 4107718 | 356268 | 4109958 | Jasper | 1 |
| 2008 | 3216.00 | Turkey Cr. | P | 7.7 | 7.7 | Mi. | Zinc (S) | Tri-State Mining District | AQL | LWW, WBC B | 366127 | 4107718 | 356268 | 4109958 | Jasper | 1 |
| 2008 | 3217.00 | Turkey Cr. | P | 6.1 | 6.1 | Mi. | Cadmium (S) | Tri-State Mining District | AQL | LWW, WBC A | 373131 | 4104203 | 366127 | 4107718 | Jasper | 1 |
| 2008 | 3217.00 | Turkey Cr. | P | 6.1 | 6.1 | Mi. | Escherichia coli (W) | Rural and suburban NPS | WBC A | AQL, LWW | 373131 | 4104203 | 366127 | 4107718 | Jasper | 1 |
| 2008 | 3217.00 | Turkey Cr. | P | 6.1 | 6.1 | Mi. | Lead (S) | Tri-State Mining District | AQL | LWW, WBC A | 373131 | 4104203 | 366127 | 4107718 | Jasper | 1 |
| 2008 | 3217.00 | Turkey Cr. | P | 6.1 | 6.1 | Mi. | Zinc (S) | Tri-State Mining District | AQL | LWW, WBC A | 373131 | 4104203 | 366127 | 4107718 | Jasper | 1 |
| 2006 | 3282.00 | Turkey Cr. | P | 2.4 | 2.4 | Mi. | Cadmium (W) | Bonne Terre chat pile | AQL | LWW, WBC B | 715483 | 4200142 | 714627 | 4203617 | St. Francois | 1 |
| 2006 | 3282.00 | Turkey Cr. | P | 2.4 | 2.4 | Mi. | Lead (W) | Bonne Terre chat pile | AQL | LWW, WBC B | 715483 | 4200142 | 714627 | 4203617 | St. Francois | 1 |
| 2006 | 3282.00 | Turkey Cr. | P | 1.2 | 2.4 | Mi. | Zinc (W) | Bonne Terre chat pile | AQL | LWW, WBC B | 715072 | 4201822 | 714627 | 4203617 | St. Francois | 1 |
| 2010 | 1414.00 | Turnback Cr. | P | 14.0 | 14.0 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, CDF, LWW, SCR | 742611 | 4165654 | 739596 | 4162978 | Lawrence/ Dade | 1 |
| 2006 | 2579.00 | Warm Fk. Spring R. | P | 13.8 | 13.8 | Mi. | Fecal Coliform (W) | Source Unknown | WBC A | AQL, IRR, LWW, SCR | 627786 | 4054476 | 631872 | 4040311 | Oregon | 1 |
| 2006 | 1708.00 | Watkins Cr. | C | 3.5 | 3.5 | Mi. | Chloride (W) | Urban Runoff/ Storm Sewers | AQL | LWW, WBC B | 744098 | 4294786 | 745384 | 4295397 | St. Louis | 1 |
| 2006 | 1708.00 | Watkins Cr. | C | 3.5 | 3.5 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 744098 | 4294786 | 745384 | 4295397 | St. Louis | 1 |
| 2012 | 1708.00 | Watkins Cr. | C | 3.5 | 3.5 | Mi. | pH (W) | Urban Runoff/ Storm Sewers | AQL | LWW, WBC B | 744098 | 4294786 | 745384 | 4295397 | St. Louis | 1 |
| 2010 | 7071.00 | Weatherby Lake | L3 | 194.0 | 194 | Ac. | Chlorophyll-a (W) | Urban Runoff/ Storm Sewers | AQL | LWW, SCR, WBC A | | | 363437 | 4175258 | Platte | 1 |
| 2010 | 7071.00 | Weatherby Lake | L3 | 194.0 | 194 | Ac. | Mercury in Fish Tissue (T) | Atmospheric Deposition - Toxics | AQL | LWW, SCR, WBC A | 357388 | 4172186 | 363437 | 4175258 | Platte | 1 |
| 2010 | 7071.00 | Weatherby Lake | L3 | 194.0 | 194 | Ac. | Nitrogen, Total (W) | Urban Runoff/ Storm Sewers | AQL | LWW, SCR, WBC A | | | 363437 | 4175258 | Platte | 1 |
|  | 560.00 | Weldon R. | P | 42 | 42 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 477268 | 4461711 | 481600 | 4443207 | Mercer/ Grundy | 1 |
| 2006 | 2755.00 | West Fk. Black R. | P | 2.1 | 32.3 | Mi. | Lead (S) | West Fork Mine | AQL | CLF, LWW, WBC A | 667316 | 4150995 | 669771 | 4151594 | Reynolds | 1 |
| 2008 | 2755.00 | West Fk. Black R. | P | 2.1 | 32.3 | Mi. | Nickel (S) | West Fork Lead Mine/Mill | AQL | CLF, LWW, WBC A | 667316 | 4150995 | 669771 | 4151594 | Reynolds | 1 |
| 2008 | 1317.00 | West Fk. Drywood Cr. | C | 8.1 | 8.1 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW, WBC B | 357342 | 4172200 | 363431 | 4175253 | Vernon | 1 |
| 2006 | 613.00 | West Fk. Locust Cr. | C | 17.0 | 17 | Mi. | Cause Unknown (W) | Source Unknown | AQL | LWW | 477260 | 4461711 | 481625 | 4443186 | Sullivan | 1 |
| 2002 | 613.00 | West Fk. Locust Cr. | C | 17.0 | 17 | Mi. | Oxygen, Dissolved (W) | Source Unknown | AQL | LWW | 477260 | 4461711 | 481625 | 4443186 | Sullivan | 1 |
| 2010 | 1504.00 | Whetstone Cr. | P | 12.2 | 12.2 | Mi. | Oxygen, Dissolved (W) | Livestock,Grazing or Feeding Operations | AQL | CLF, LWW, WBC B | 556421 | 4116033 | 554003 | 4128699 | Wright | 1 |
| 2008 | 3182.00 | White Oak Cr. | C | 18.0 | 18 | Mi. | Escherichia coli (W) | Rural NPS runoff | WBC A | AQL, IRR, LWW | 415910 | 4124129 | 396445 | 4113579 | Lawrence/ Jasper | 1 |

| Year First Listed | WBID | Water Body Name | Class | MDNR Proposed Impairment Size | MDNR Water Body Size | Size Units | Pollutant | Source | Impaired Uses | Other (Unimpaired) Uses | Upstream X (UTM) | Upstream Y (UTM) | Downstream X (UTM) | Downstream Y (UTM) | County Upstream/ Downstream | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 | 1700.00 | Wildhorse Cr. | C | 3.9 | 3.9 | Mi. | Escherichia coli (W) | Runoff from Forest/ Grassland/ Parkland, Rural, Residential Areas | WBC B | AQL, LWW | 699014 | 4276142 | 699385 | 4279854 | St. Louis | 1 |
| 2012 | 3171.00 | Williams Cr. | P | 1.0 | 1 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, CDF, LWW | 421762 | 4107279 | 420777 | 4107590 | Lawrence | 1 |
| 2010 | 3172.00 | Williams Cr. | P | 8.5 | 8.5 | Mi. | Aquatic Macroinvertebrate Bioassessments (W) | Source Unknown | AQL | LWW, WBC A | 432043 | 4105528 | 421762 | 4107279 | Lawrence | 1 |
| 2010 | 3172.00 | Williams Cr. | P | 8.5 | 8.5 | Mi. | Escherichia coli (W) | Rural NPS | WBC A | AQL, LWW | 432043 | 4105528 | 421762 | 4107279 | Lawrence | 1 |
| 2010 | 3594.00 | Williams Cr. | P | 1.0 | 1.0 | Mi. | Escherichia coli (W) | Urban Runoff/ Storm Sewers | WBC B | AQL, LWW | 716794 | 4268174 | 716670 | 4269283 | St. Louis | 1 |
| 2012 | 3594.00 | Williams Cr. | P | 1.0 | 1.0 | Mi. | pH (W) | Source Unknown | AQL | LWW, WBC B | 716794 | 4268174 | 716670 | 4269283 | St. Louis | 1 |
| 2012 | 3280.00 | Willow Br. | P | 2.2 | 2.2 | Mi. | Escherichia coli (W) | Rural NPS | WBC B | AQL, LWW | 366145 | 4086268 | 364029 | 4084118 | Newton | 1 |
| 2010 | 955.00 | Willow Fk. | C | 6.5 | 6.5 | Mi. | Oxygen, Dissolved (W) | Tipton WWTP, Source Unknown | AQL | LWW, WBC B | 515568 | 4276519 | 522993 | 4273677 | Moniteau | 1 |
| 2006 | 2375.00 | Wilsons Cr. | P | 11.9 | 14 | Mi. | Escherichia coli (W) | Nonpoint Source | WBC B | AQL, LWW | 468505 | 4116821 | 464369 | 4102522 | Greene/ Christian | 1 |

Comments

1. 2012 Assessment indicates impairment.
2. Insufficient cause to delist.
3. Assessed as unimpaired; expected to be retained by EPA.
4. Previously listed as WBID 1711.
5. Previously listed as WBID 1711U.
6. Previously listed erroneously as WBID 0091.

Uses: AQL=Aquatic Life Protection, WBC A & WBC B=Whole Body Contact Recreation, DWS=Drinking Water Supply, LWW=Livestock and Wildlife Watering, SCR=Secondary Contact Recreation, IRR=Irrigation, IND=Industrial Uses

*Misidentified in Water Quality Standards as Bowling Green New Lake. Acres shown on list are the actual acres.
** Lake Buteo is the only one of the Knob Noster S. P. Lakes on this list.
***This section of the Osage River inadvertently left out of Water Quality Standards, thus there are no designated beneficial uses.
****Lac Capri is the only one of the Terre du Lac Lakes on the list.

Table 15. Other Waters Rated As Impaired and Believed to Be Impaired

The following list includes other classified waters in Missouri found to be impaired both by applying the Methodology for the Development of the 2012 Section 303(d) List in Missouri and the best professional judgment of the department. Included in this list are waters with approved TMDLs, waters where sufficient pollution control measures are in place, waters which are impaired by measures other than discrete pollutants, and other waters which were not approved for 303(d) listing by the Clean Water Commission.

| Waterbody Name | WBID | Size (Miles) | County | Pollutant | Source |
|---|---|---|---|---|---|
| Big Bottom Cr. | 1746 | 0.6 | Ste. Genevieve | Ammonia | Lake Forest Estates WWTF |
| Big Bottom Cr. | 1746 | 1.5 | Ste. Genevieve | Low D.O. | Lake Forest Estates WWTF |
| Big Cr., Trib. | 3940U | 0.6 | Iron | Cadmium | Glover smelter |
| Big Cr., Trib. | 3940U | 0.6 | Iron | Zinc | Glover smelter |
| Big R. | 2074 | 55.6 | Jefferson | Lead(S&T) | Mill tailings (Aban.) |
| Brushy Cr. | 1592 | 3.1 | Texas | Low D.O. | Houston WWTP |
| Buffalo Ditch | 3118 | 17.3 | Dunklin | Low D.O. | Unknown |
| Chariton R. | 640 | 111 | Putnam/Chariton | Bacteria | Rural NPS |
| Dry Auglaize Cr. | 1145 | 1 | Laclede | Low D.O. | Unknown |
| Dry Auglaize Cr. | 1145 | 3 | Laclede | Unknown | Unknown |
| E. Brush Cr. | 811 | 1.1 | Moniteau | Low D.O. | California N WWTF |
| E. Fk. Black R. | 2737 | 0.5 | Reynolds | Hydromod. | Impoundment |
| E. Whetstone Cr. | 3964U | 0.3 | Wright | Ammonia | Mountain Grove E WWTP |
| Elkhorn Cr. | 189 | 17.6 | Montgomery | Low D.O. | Montgomery City NE WWTP |
| Gabriel Cr. | 883 | 13.6 | Morgan | Low D.O. | Stover NW, SW WWTPs |
| Grand R. | 430 | 8 | Gentry | Aq. Habitat | Channelization |
| Hinkson Cr. | 1007 | 7.6 | Boone | Unknown | Urban NPS |
| Hinkson Cr. | 1008 | 18.8 | Boone | Bacteria | Urban NPS |
| Hinkson Cr. | 1008 | 6.8 | Boone | Unknown | Urban NPS |
| Indian Cr., Trib. | 3663 | 0.3 | Washington | Lead | Viburnum Mine |
| Jacks Fk. | 2681 | 7.5 | Shannon | Bacteria | Eminence WWTP/X-Country TR |
| Jordan Cr. | 3374 | 2 | Greene | Unknown | Unknown |
| Joyce Cr. | 3233 | 4.5 | Barry | Bacteria | Rural NPS |
| L. Lindley Cr. | 1438 | 3.7 | Dallas | Unknown | Unknown |
| L. Sac R. | 1381 | 36.9 | Greene/Polk | Bacteria | Urban/Rural NPS |
| Long Br. | 857 | 6 | Pettis/Johnson | Low D.O. | Unknown |
| Long Br. | 857 | 6 | Pettis/Johnson | Unknown | Unknown |
| Marmaton R. | 1308 | 35.7 | Vernon | Low D.O. | Rural NPS |
| McKenzie Cr. | 2786 | 6.3 | Wayne | Low D.O. | Piedmont WWTF |
| McKenzie Cr. | 2787 | 4.7 | Wayne | Low pH | Natural, Gads Hill Quarry |
| M. Fk. Tebo Cr. | 1284 | 3 | Henry | SO4+Cl | Coal AML |
| M. Fk. Tebo Cr., Trib. | 1288 | 3.1 | Henry | pH | Coal AML |
| M. Fk. Tebo Cr., Trib. | 1288 | 3.1 | Henry | SO4+Cl | Coal AML |
| Monegaw Cr. | 1234 | 2.1 | St. Clair | SO4+Cl | Coal AML |
| Mound Branch | 1300 | 8.9 | Bates | Low D.O. | Unknown |
| N. Fabius R. | 56 | 13.2 | Clark/Lewis | Aq. Habitat | Channelization |
| N. Moreau Cr. | 942 | 10.9 | Moniteau | Low D.O. | Unknown |
| Piper Cr. | 1444 | 5.3 | Polk | Unknown | Unknown |

| Waterbody Name | WBID | Size (Miles) | County | Pollutant | Source |
|---|---|---|---|---|---|
| Pogue Cr. | 3232 | 2.5 | Barry | Bacteria | Rural NPS |
| Pond Cr. | 2128 | 1 | Washington | Inorganic Sediment | Barite AML |
| Saline Cr. | 2859 | 1.7 | Madison | Nickel (W) | Madison Mine |
| Sandy Cr. | 652 | 3 | Putnam | Unknown | Unknown |
| Second Nicolson Cr. | 1319 | 4.5 | Barton | SO4+Cl | Coal AML |
| Shibboleth Br. | 2120 | 3 | Washington | Lead | Mill tailings (Aban.) |
| Shoal Cr. | 3230 | 15.7 | Barry/Newton | Bacteria | Rural NPS |
| Spring Cr. | 1870 | 5.1 | Dent | Low D.O. | Salem WWTF |
| Spring Cr. | 1870 | 5.1 | Dent | Organic Sediment | Salem WWTF |
| Stinson Cr. | 710 | 1.9 | Callaway | Org. Sediment | Fulton WWTP |
| Stinson Cr. | 710 | 1.9 | Callaway | Low D.O. | Unknown |
| Town Br. | 3822 | 2.5 | Polk | Unknown | Unknown |
| Town Br. | 3822 | 1.1 | Polk | Organic Sediment | Bolivar WWTP |
| Trace Cr. | 2850 | 0.4 | Madison | Low pH | Natural |
| Village Cr. | 2863 | 1.9 | Madison | Inorganic Sediment | Mill tailings (Aban.) |
| Village Cr. | 2863 | 1.9 | Madison | Lead | Mill tailings (Aban.) |
| Village Cr. | 2864 | 3 | Madison | Lead | Mill tailings (Aban.) |

Table 16. Other Potentially Impaired Waters

The following waters are those for which there is some indication that an impairment to some designated use may exist, but the current data or information indicating the impairment do not meet the data requirements set out by Missouri's Section 303(d) Listing Methodology. The Department will make an effort to conduct further monitoring on these waters in order to determine defensibly whether these impairments actually exist.

A large number of these potential impairments are ascribed to rural nonpoint sources. However, it should be noted that some of these problems, particularly low dissolved oxygen levels, might be due to natural conditions of the waters that are incompletely understood at this time. The department is currently studying baseline dissolved oxygen levels in small streams in regions of concern, which will help in the future to better distinguish natural stream conditions from anthropogenic impairments.

| Waterbody | WBID | Size | Units | Potential Pollutant or Condition |
|---|---|---|---|---|
| Ackerman Ditch | 2809 | 14.10 | Mi. | Habitat Degradation |
| Agee Cr. | 334 | 4.80 | Mi. | Habitat Degradation |
| Arapahoe Cr. | 282 | 8.00 | Mi. | Habitat Degradation |
| Barren Fk. | 2656 | 2.00 | Mi. | Habitat Degradation |
| Bean Br. | 148 | 8.70 | Mi. | Habitat Degradation |
| Bear Cr. | 193 | 16.10 | Mi. | Habitat Degradation |
| Bear Cr. | 272 | 9.80 | Mi. | Habitat Degradation |
| Bear Cr. | 416 | 4.50 | Mi. | Habitat Degradation |
| Bear Cr. | 1015 | 6.00 | Mi. | Habitat Degradation |
| Beaver Br. | 3266 | 3.50 | Mi. | Zinc (Sediment) |
| Beaver Br. | 3267 | 1.50 | Mi. | Zinc (Sediment) |
| Beaver Cr. | 1509 | 5.70 | Mi. | Unknown (Biological Data) |
| Beaver Dam Cr. | 145 | 5.00 | Mi. | Habitat Degradation |
| Bee Cr. | 137 | 5.80 | Mi. | Habitat Degradation |
| Bee Cr. | 273 | 29.40 | Mi. | Habitat Degradation |
| Bee Cr., Trib. | 274 | 1.80 | Mi. | Habitat Degradation |
| Bee Cr., Trib. | 3967 | 0.50 | Mi. | Habitat Degradation |
| Bee Tree Lake | 7309 | 10.00 | Ac. | Mercury (Fish Tissue) |
| Beef Br. | 3224 | 2.50 | Mi. | Cadmium, Zinc (Sediment) |
| Belleau Cr. | 2179 | 5.10 | Mi. | Habitat Degradation |
| Big Cr. | 205 | 10.30 | Mi. | Habitat Degradation |
| Big Cr. | 207 | 17.70 | Mi. | Habitat Degradation |
| Big Cr. | 2647 | 23.00 | Mi. | Habitat Degradation |
| Big Cr., Trib. | 2674 | 3.00 | Mi. | Habitat Degradation |
| Big Cr., Trib. | 2923 | 1.00 | Mi. | Habitat Degradation |
| Big Lead Cr. | 180 | 5.00 | Mi. | Habitat Degradation |
| Big Muddy Cr. | 461 | 10.20 | Mi. | Habitat Degradation |
| Big Muddy Cr. | 462 | 10.90 | Mi. | Habitat Degradation |
| Big Muddy Cr. | 441 | 12.00 | Mi. | Habitat Degradation |
| Big Rock Cr. | 464 | 3.70 | Mi. | Habitat Degradation |
| Big Rock Cr. | 465 | 5.90 | Mi. | Habitat Degradation |
| Billy Cr. | 659 | 5.00 | Mi. | Habitat Degradation |
| Billy's Br. | 124 | 11.50 | Mi. | Habitat Degradation |
| Black Cr. | 112 | 21.80 | Mi. | Habitat Degradation |
| Black River Ditch | 2807 | 11.10 | Mi. | Habitat Degradation |
| Blackwater R. | 891 | 79.40 | Mi. | Atrazine, Sediment |

| Waterbody | WBID | Size | Units | Potential Pollutant or Condition |
|---|---|---|---|---|
| Brazil Cr. | 1983 | 13.90 | Mi. | Unknown (Biological Data) |
| Bridge Cr. | 66 | 8.40 | Mi. | Habitat Degradation |
| Bridge Cr. | 70 | 27.00 | Mi. | Habitat Degradation |
| Brush Cr. | 192 | 7.80 | Mi. | Habitat Degradation |
| Brush Cr. | 107 | 3.40 | Mi. | Habitat Degradation |
| Brush Cr. | 276 | 7.40 | Mi. | Habitat Degradation |
| Brush Cr. | 408 | 5.90 | Mi. | Habitat Degradation |
| Brushy Cr. | 3785 | 0.50 | Mi. | Habitat Degradation |
| Brushy Cr. | 336 | 11.00 | Mi. | Habitat Degradation |
| Brushy Cr. | 377 | 7.00 | Mi. | Habitat Degradation |
| Brushy Cr. | 395 | 2.00 | Mi. | Habitat Degradation |
| Brushy Cr. | 438 | 5.00 | Mi. | Habitat Degradation |
| Brushy Cr. | 531 | 5.00 | Mi. | Habitat Degradation |
| Brushy Cr. | 69 | 4.50 | Mi. | Habitat Degradation |
| Brushy Cr. | 167 | 3.00 | Mi. | Habitat Degradation |
| Bullskin Cr. | 3264 | 4.90 | Mi. | Habitat Degradation |
| Burr Oak Cr. | 363 | 2.00 | Mi. | Habitat Degradation |
| Butcher Cr. | 203 | 1.00 | Mi. | Habitat Degradation |
| Callaway Fk. | 1606 | 4.50 | Mi. | Hydromodification |
| Camp Br. | 198 | 4.00 | Mi. | Habitat Degradation |
| Camp Cr. | 196 | 6.30 | Mi. | Habitat Degradation |
| Camp Cr. | 197 | 6.00 | Mi. | Habitat Degradation |
| Campbell Cr. | 491 | 2.80 | Mi. | Habitat Degradation |
| Cane Creek Ditch | 2820 | 7.50 | Mi. | Habitat Degradation |
| Carroll Cr. | 389 | 9.40 | Mi. | Habitat Degradation |
| Carver Br. | 3241 | 3.00 | Mi. | Habitat Degradation |
| Casmer Br. | 209 | 1.50 | Mi. | Habitat Degradation |
| Castile Cr., Trib. | 323 | 1.20 | Mi. | Habitat Degradation |
| Chapman Br. | 476 | 1.90 | Mi. | Habitat Degradation |
| Charrette Cr. | 1615 | 4.80 | Mi. | Hydromodification |
| City Lake #2 (Perry) | 7048 | 7.00 | Ac. | Atrazine |
| Clear Cr. | 117 | 4.70 | Mi. | Habitat Degradation |
| Clear Cr. | 292 | 13.00 | Mi. | Habitat Degradation |
| Clear Cr. | 433 | 6.00 | Mi. | Habitat Degradation |
| Clear Cr. | 2082 | 4.40 | Mi. | Unknown (Biological Data) |
| Clear Cr. | 388 | 5.00 | Mi. | Unknown (Biological Data) |
| Clear Cr. | 390 | 13.50 | Mi. | Unknown (Biological Data) |
| Clear Cr., Trib. | 393 | 2.20 | Mi. | Habitat Degradation |
| Cole Cr. | 225 | 5.70 | Mi. | Habitat Degradation |
| Contrary Cr. | 269 | 10.00 | Mi. | Habitat Degradation |
| Coon Cr. | 187 | 13.20 | Mi. | Habitat Degradation |
| Coon Cr. | 208 | 9.20 | Mi. | Habitat Degradation |
| Coon Cr. | 132 | 11.80 | Mi. | Habitat Degradation |
| Cottonwood Cr. | 410 | 3.90 | Mi. | Habitat Degradation |
| Cottonwood Cr. | 527 | 4.30 | Mi. | Habitat Degradation |
| Courtois Cr. | 1947 | 1.70 | Mi. | Unknown (Biological Data) |
| Cow Br. | 247 | 4.40 | Mi. | Habitat Degradation |

| Waterbody | WBID | Size | Units | Potential Pollutant or Condition |
|---|---|---|---|---|
| Crabapple Cr. | 536 | 3.80 | Mi. | Habitat Degradation |
| Crabapple Cr., Trib. | 365 | 1.30 | Mi. | Habitat Degradation |
| Craven Ditch | 2816 | 11.00 | Mi. | Habitat Degradation, Low Dissolved Oxygen |
| Crawford Cr. | 1254 | 5.00 | Mi. | Habitat Degradation |
| Crooked Cr. | 201 | 1.50 | Mi. | Habitat Degradation |
| Crooked Cr. | 188 | 4.00 | Mi. | Habitat Degradation |
| Crooked Cr. | 330 | 2.80 | Mi. | Habitat Degradation |
| Crooked Cr. | 333 | 4.00 | Mi. | Habitat Degradation |
| Crooked R. | 376 | 7.50 | Mi. | Habitat Degradation |
| Crooked R. | 371 | 58.10 | Mi. | Habitat Degradation, E. coli |
| Current R. | 2662 | 18.80 | Mi. | Mercury (Fish Tissue) |
| Cypress Cr. | 443 | 15.80 | Mi. | Habitat Degradation |
| Cypress Ditch #1 | 2616 | 9.70 | Mi. | Habitat Degradation |
| Davis Cr. | 255 | 3.50 | Mi. | Habitat Degradation |
| Davis Cr. | 144 | 8.80 | Mi. | Habitat Degradation, Low Dissolved Oxygen |
| Davis Cr. Ditch | 253 | 6.70 | Mi. | Habitat Degradation |
| Davis Cr., Trib. | 254 | 3.00 | Mi. | Habitat Degradation |
| Dead Oak Br. | 539 | 1.00 | Mi. | Habitat Degradation |
| Dicks Cr. | 320 | 7.30 | Mi. | Habitat Degradation |
| Dillon Cr. | 268 | 4.80 | Mi. | Sediment |
| Ditch #11 | 3812 | 3.00 | Mi. | Habitat Degradation |
| Ditch #16 | 3813 | 11.20 | Mi. | Habitat Degradation |
| Ditch #2 | 2618 | 6.00 | Mi. | Habitat Degradation |
| Ditch #2 | 2617 | 3.20 | Mi. | Habitat Degradation, Low Dissolved Oxygen, Bacteria |
| Ditch #22 | 2772 | 7.00 | Mi. | Habitat Degradation |
| Ditch #23 | 2773 | 5.80 | Mi. | Habitat Degradation |
| Ditch To Black R. | 2770 | 9.50 | Mi. | Habitat Degradation |
| Ditch To Black R. | 2776 | 10.70 | Mi. | Habitat Degradation |
| Ditch To Ditch #2 | 2619 | 1.50 | Mi. | Habitat Degradation |
| Dog Cr. | 510 | 5.70 | Mi. | Sediment |
| Dry Br. | 182 | 5.10 | Mi. | Habitat Degradation |
| Dry Cr. | 3418 | 9.30 | Mi. | Habitat Degradation |
| Drywood Cr. | 1314 | 30.00 | Mi. | Unknown (Biological Data) |
| East Branch Elkhorn Cr. | 288 | 4.70 | Mi. | Habitat Degradation |
| East Branch Squaw Cr. | 257 | 4.20 | Mi. | Habitat Degradation |
| East Fork Big Muddy Cr. | 463 | 2.00 | Mi. | Habitat Degradation |
| East Fork Crooked R. | 373 | 6.40 | Mi. | Habitat Degradation |
| East Fork Crooked R., Trib. | 374 | 4.80 | Mi. | Habitat Degradation |
| East Fork Drywood Cr. | 1320 | 10.00 | Mi. | Low Dissolved Oxygen |
| East Fork Fishing R. | 386 | 12.90 | Mi. | Unknown (Biological Data) |
| East Fork Grand R. | 467 | 6.50 | Mi. | Habitat Degradation |
| East Fork Huzzah Cr. | 1926 | 2.00 | Mi. | Unknown (Biological Data) |
| East Fork Little Blue R. | 428 | 3.70 | Mi. | Habitat Degradation |
| East Fork Little Blue R., Trib. | 429 | 1.90 | Mi. | Habitat Degradation |
| East Fork Little Tarkio Cr. | 249 | 17.80 | Mi. | Habitat Degradation |
| East Fork Lost Cr. | 497 | 10.00 | Mi. | Habitat Degradation |
| East Fork Postoak Cr. | 932 | 12.20 | Mi. | Habitat Degradation |

| Waterbody | WBID | Size | Units | Potential Pollutant or Condition |
|---|---|---|---|---|
| East Fork Shoal Cr. | 398 | 2.90 | Mi. | Habitat Degradation |
| East Fork Sni-A-Bar Cr. | 402 | 9.60 | Mi. | Habitat Degradation, Low Dissolved Oxygen |
| Ebo Cr. | 2085 | 1.60 | Mi. | Habitat Degradation |
| Edmondson Cr. | 414 | 1.90 | Mi. | Habitat Degradation |
| Edmondson Cr., Trib. | 415 | 3.10 | Mi. | Habitat Degradation |
| Elk Fork Salt R. | 130 | 7.70 | Mi. | Habitat Degradation |
| Elkhorn Cr. | 287 | 11.80 | Mi. | Habitat Degradation |
| Elm Br. | 149 | 3.00 | Mi. | Habitat Degradation |
| Elm Grove Br. | 331 | 4.20 | Mi. | Habitat Degradation |
| Fabius R. | 55 | 3.50 | Mi. | Habitat Degradation |
| Fassnight Cr. | 3370 | 2.80 | Mi. | Unknown (Biological Data) |
| Fee Fee Cr. (old) | 1705 | 1.00 | Mi. | Habitat Degradation |
| Femme Osage Cr. | 1605 | 8.20 | Mi. | Mercury (Fish Tissue) |
| Fire Br. | 375 | 5.40 | Mi. | Habitat Degradation |
| First Cr. | 318 | 4.70 | Mi. | Habitat Degradation |
| Fish Br. | 143 | 1.90 | Mi. | Habitat Degradation |
| Flat Cr. | 129 | 13.50 | Mi. | Habitat Degradation |
| Fletchall Cr. | 471 | 4.00 | Mi. | Habitat Degradation |
| Florida Cr. | 289 | 8.40 | Mi. | Habitat Degradation |
| Floyd Cr. | 114 | 5.10 | Mi. | Habitat Degradation |
| Galbreath Cr. | 135 | 5.80 | Mi. | Habitat Degradation |
| Galloway Cr. | 3373 | 3.20 | Mi. | Habitat Degradation |
| Garrison Fk. | 407 | 6.80 | Mi. | Habitat Degradation |
| Gasconade R. | 1496 | 11.20 | Mi. | Unknown (Biological Data) |
| Goose Cr. | 456 | 2.40 | Mi. | Habitat Degradation |
| Goose Cr. | 532 | 4.40 | Mi. | Habitat Degradation |
| Grand R., Old Channel | 512 | 15.20 | Mi. | Habitat Degradation |
| Grand R., Old Channel | 513 | 3.10 | Mi. | Habitat Degradation |
| Grand R., Old Channel | 517 | 2.50 | Mi. | Habitat Degradation |
| Grassy Cr. | 72 | 19.80 | Mi. | Habitat Degradation |
| Greys Lake | 233 | 5.20 | Mi. | Habitat Degradation |
| Grindstone Cr., Trib. | 504 | 1.00 | Mi. | Habitat Degradation |
| Grove Cr. | 321 | 3.30 | Mi. | Habitat Degradation |
| Grove Cr. | 3204 | 2.90 | Mi. | Lead, Zinc (Sediment) |
| Guinns Cr. | 23 | 0.50 | Mi. | Habitat Degradation |
| Harviell Ditch (#3) | 2615 | 16.20 | Mi. | Habitat Degradation |
| Hayzlett Br. | 285 | 2.40 | Mi. | Habitat Degradation |
| Hickory Cr. | 186 | 6.00 | Mi. | Habitat Degradation |
| Hickory Cr. | 266 | 1.00 | Mi. | Habitat Degradation |
| Hickory Cr. | 308 | 1.00 | Mi. | Habitat Degradation |
| Hickory Cr. | 335 | 2.00 | Mi. | Habitat Degradation |
| Hickory Cr. | 442 | 2.80 | Mi. | Habitat Degradation |
| Hickory Cr. | 490 | 3.00 | Mi. | Habitat Degradation |
| High Cr. | 229 | 6.30 | Mi. | Habitat Degradation |
| High Cr., Trib. | 232 | 2.00 | Mi. | Habitat Degradation |
| High Creek Ditch | 228 | 3.70 | Mi. | Habitat Degradation |
| Highly Cr. | 307 | 3.90 | Mi. | Habitat Degradation |

| Waterbody | WBID | Size | Units | Potential Pollutant or Condition |
|---|---|---|---|---|
| Holland Br. | 350 | 3.00 | Mi. | Habitat Degradation |
| Holtzclaw Cr. | 351 | 2.00 | Mi. | Habitat Degradation |
| Honey Cr. | 338 | 6.70 | Mi. | Habitat Degradation |
| Honey Cr. | 509 | 8.30 | Mi. | Habitat Degradation |
| Honey Cr. | 919 | 7.00 | Mi. | Habitat Degradation |
| Hoover Cr. | 127 | 7.20 | Mi. | Habitat Degradation |
| Horseshoe Cr. | 3413 | 5.80 | Mi. | Low Dissolved Oxygen |
| Huff Cr. | 306 | 2.00 | Mi. | Habitat Degradation |
| Hurricane Br. | 435 | 1.80 | Mi. | Habitat Degradation |
| Indian Br. | 432 | 3.80 | Mi. | Habitat Degradation |
| Indian Camp Cr. | 211 | 3.30 | Mi. | Habitat Degradation |
| Indian Cr. | 62 | 3.50 | Mi. | Habitat Degradation |
| Indian Cr. | 171 | 20.00 | Mi. | Habitat Degradation |
| Indian Cr. | 477 | 3.20 | Mi. | Habitat Degradation |
| Indian Cr. | 1999 | 21.40 | Mi. | Habitat Degradation |
| Iowa Ditch | 234 | 2.80 | Mi. | Habitat Degradation |
| Irvins Br. | 494 | 3.30 | Mi. | Habitat Degradation |
| Island Cr. | 485 | 8.90 | Mi. | Habitat Degradation |
| Jenkins Cr. | 286 | 7.20 | Mi. | Habitat Degradation |
| Joachim Cr. | 1719 | 30.20 | Mi. | Lead (Sediment) |
| Johns Br. | 184 | 1.30 | Mi. | Habitat Degradation |
| Jones Br. | 3968 | 1.50 | Mi. | VOCs (Sediment) |
| Jordan Br. | 275 | 7.20 | Mi. | Habitat Degradation |
| Jordan Cr. | 329 | 1.40 | Mi. | Habitat Degradation |
| Keeney Cr. | 384 | 4.90 | Mi. | Habitat Degradation |
| Kettle Cr. | 516 | 0.80 | Mi. | Habitat Degradation |
| Kimsey Cr. | 262 | 0.80 | Mi. | Habitat Degradation |
| Kimsey Cr. | 263 | 2.50 | Mi. | Habitat Degradation |
| Kimsey Cr. | 264 | 6.70 | Mi. | Habitat Degradation |
| Lake Cr. | 359 | 5.70 | Mi. | Habitat Degradation |
| Lake Cr. | 431 | 3.30 | Mi. | Habitat Degradation |
| Lake Tom Sawyer | 7035 | 4.00 | Ac. | Mercury (Fish Tissue) |
| Larry Cr. | 507 | 1.20 | Mi. | Habitat Degradation |
| Lead Cr. | 179 | 7.50 | Mi. | Habitat Degradation |
| Lead Cr. | 178 | 1.00 | Mi. | Habitat Degradation |
| Lick Fk. | 514 | 5.70 | Mi. | Habitat Degradation |
| Lick Fk. | 515 | 9.80 | Mi. | Habitat Degradation |
| Lincoln Cr. | 280 | 7.40 | Mi. | Habitat Degradation |
| Little Bear Cr. | 194 | 4.00 | Mi. | Habitat Degradation |
| Little Blue R. | 424 | 4.30 | Mi. | Habitat Degradation |
| Little Bourbeuse R. | 2063 | 3.00 | Mi. | Unknown (Biological Data) |
| Little Crooked Cr. | 118 | 4.70 | Mi. | Habitat Degradation |
| Little Dardenne Cr. | 223 | 7.40 | Mi. | Unknown (Biological Data) |
| Little Fabius R. | 79 | 36.40 | Mi. | Habitat Degradation |
| Little Fox R. | 39 | 19.80 | Mi. | Habitat Degradation |
| Little Lead Cr. | 181 | 4.00 | Mi. | Habitat Degradation |
| Little Lost Cr. | 1619 | 1.50 | Mi. | Unknown (Biological Data) |

| Waterbody | WBID | Size | Units | Potential Pollutant or Condition |
|---|---|---|---|---|
| Little Moniteau Cr. | 814 | 5.10 | Mi. | Habitat Degradation |
| Little Muddy Cr. | 440 | 4.10 | Mi. | Habitat Degradation |
| Little Otter Cr. | 120 | 6.20 | Mi. | Habitat Degradation |
| Little Otter Cr. | 526 | 3.00 | Mi. | Habitat Degradation |
| Little Sandy Cr. | 165 | 6.00 | Mi. | Habitat Degradation |
| Little Sandy Cr., Trib. | 166 | 2.10 | Mi. | Habitat Degradation |
| Little Sni-A-Bar Cr. | 403 | 6.70 | Mi. | Habitat Degradation |
| Little Sni-A-Bar Cr. | 404 | 7.50 | Mi. | Habitat Degradation |
| Little Tabo Cr. | 409 | 9.20 | Mi. | Habitat Degradation |
| Little Tarkio Cr. | 250 | 15.40 | Mi. | Habitat Degradation |
| Little Tarkio Cr., Old Channel | 260 | 5.30 | Mi. | Habitat Degradation |
| Little Tarkio Cr., Old Channel | 261 | 8.30 | Mi. | Habitat Degradation |
| Little Tarkio Ditch | 251 | 6.60 | Mi. | Habitat Degradation |
| Little Third Fork Platte R. | 328 | 26.00 | Mi. | Habitat Degradation |
| Little Wyaconda R. | 52 | 7.40 | Mi. | Habitat Degradation |
| Little Wyaconda R. | 53 | 7.50 | Mi. | Habitat Degradation |
| Littleby Cr. | 147 | 16.00 | Mi. | Habitat Degradation |
| Log Cr. | 533 | 8.80 | Mi. | Habitat Degradation |
| Long Br. | 139 | 29.00 | Mi. | Habitat Degradation |
| Long Br. | 243 | 3.00 | Mi. | Habitat Degradation |
| Long Br. | 340 | 15.00 | Mi. | Habitat Degradation |
| Long Br. | 488 | 5.70 | Mi. | Habitat Degradation |
| Long Cr. | 535 | 3.30 | Mi. | Habitat Degradation |
| Lost Cr. | 1617 | 6.40 | Mi. | Unknown (Biological Data) |
| Lost Cr. | 1618 | 3.80 | Mi. | Unknown (Biological Data) |
| Lotts Cr. | 466 | 9.70 | Mi. | Habitat Degradation |
| Lumpkin Cr. | 425 | 0.50 | Mi. | Habitat Degradation |
| Mace Cr. | 267 | 5.80 | Mi. | Habitat Degradation |
| Maple Leaf Lake | 7398 | 127.00 | Ac. | Mercury (Fish Tissue) |
| Marais des Cygnes R. | 1297 | 32.00 | Mi. | Bacteria |
| Marlowe Cr. | 474 | 6.70 | Mi. | Habitat Degradation |
| Marlowe Cr. | 475 | 1.00 | Mi. | Habitat Degradation |
| Marrowbone Cr. | 511 | 13.90 | Mi. | Habitat Degradation |
| McCarty Cr. | 1338 | 13.20 | Mi. | pH |
| McCoy Cr. | 213 | 1.90 | Mi. | Habitat Degradation |
| McCoy Cr. | 214 | 4.50 | Mi. | Habitat Degradation |
| McElroy Cr. | 231 | 3.00 | Mi. | Habitat Degradation |
| McGuire Br. | 324 | 5.40 | Mi. | Habitat Degradation |
| Memphis Reservoir | 7013 | 39.00 | Mi. | Temperature |
| Middle Branch Squaw Cr. | 258 | 3.00 | Mi. | Habitat Degradation |
| Middle Fork Grand R. | 472 | 2.50 | Mi. | Habitat Degradation |
| Middle Fork Grand R., Trib. | 473 | 1.40 | Mi. | Habitat Degradation |
| Middle Fork Lost Cr. | 496 | 8.00 | Mi. | Habitat Degradation |
| Middle Fork Salt R., Trib. | 125 | 1.00 | Mi. | Habitat Degradation |
| Middle Tarkio Cr. | 245 | 10.00 | Mi. | Habitat Degradation |
| Mikes Cr. | 3254 | 4.00 | Mi. | Habitat Degradation |
| Mill Cr. | 265 | 10.00 | Mi. | Habitat Degradation |

| Waterbody | WBID | Size | Units | Potential Pollutant or Condition |
|---|---|---|---|---|
| Mill Cr. | 301 | 10.80 | Mi. | Habitat Degradation |
| Mill Cr. | 529 | 1.30 | Mi. | Habitat Degradation |
| Mill Cr., Trib. | 303 | 1.80 | Mi. | Habitat Degradation |
| Millers Cr. | 740 | 1.90 | Mi. | Sedimentation |
| Milligan Cr. | 134 | 9.00 | Mi. | Habitat Degradation |
| Mineral Fk., Trib. | 2115 | 2.00 | Mi. | Lead, Zinc (Sediment) |
| Missouri R., Trib. | 411 | 5.30 | Mi. | Habitat Degradation |
| Mistaken Cr. | 1544 | 1.50 | Mi. | Unknown (Biological Data) |
| Moccasin Cr. | 483 | 2.60 | Mi. | Habitat Degradation |
| Moss Br. | 302 | 2.40 | Mi. | Habitat Degradation |
| Moss Cr. | 369 | 13.70 | Mi. | Habitat Degradation |
| Moss Cr., Trib. | 370 | 0.50 | Mi. | Habitat Degradation |
| Mouse Cr. | 426 | 1.50 | Mi. | Habitat Degradation, Low Dissolved Oxygen |
| Mozingo Cr. | 343 | 5.10 | Mi. | Habitat Degradation |
| Mud Cr. | 128 | 17.50 | Mi. | Habitat Degradation |
| Mud Cr. | 538 | 4.50 | Mi. | Habitat Degradation |
| Mud Cr. | 541 | 6.70 | Mi. | Habitat Degradation |
| Mud Cr., Trib. | 544 | 2.00 | Mi. | Habitat Degradation |
| Mud Cr., Trib. | 545 | 1.00 | Mi. | Habitat Degradation |
| Mud Cr., Trib. | 546 | 0.80 | Mi. | Habitat Degradation |
| Mud Creek Ditch | 537 | 3.50 | Mi. | Habitat Degradation |
| Muddy Cr. | 291 | 3.50 | Mi. | Habitat Degradation |
| Muddy Cr. | 434 | 3.50 | Mi. | Habitat Degradation |
| Muddy Cr. | 492 | 6.00 | Mi. | Habitat Degradation |
| Muddy Fk. | 391 | 8.40 | Mi. | Inconclusive Invert Data |
| Narrows Cr. | 126 | 2.60 | Mi. | Habitat Degradation |
| Naylor Cr. | 277 | 1.00 | Mi. | Habitat Degradation |
| Neals Cr. | 2752 | 3.20 | Mi. | Nickel, Lead (Sediment) |
| New #7 Chute | 3157 | 2.00 | Mi. | Habitat Degradation |
| New Hope Cr. | 392 | 5.50 | Mi. | Habitat Degradation |
| Nichols Cr. | 309 | 4.60 | Mi. | Habitat Degradation |
| Nichols Cr., Trib. | 310 | 1.30 | Mi. | Habitat Degradation |
| Nishnabotna R., Old Channel | 238 | 13.70 | Mi. | Habitat Degradation |
| Nishnabotna R., Old Channel | 240 | 3.00 | Mi. | Habitat Degradation |
| Nishnabotna R., Trib. To Old Channel | 239 | 0.90 | Mi. | Habitat Degradation |
| Nishnabotna R., Trib. To Old Channel | 241 | 2.00 | Mi. | Habitat Degradation |
| Nodaway R., Old Channel | 284 | 10.00 | Mi. | Habitat Degradation |
| Nodaway R., Old Channel | 294 | 1.20 | Mi. | Habitat Degradation |
| Nodaway R., Old Channel | 295 | 2.00 | Mi. | Habitat Degradation |
| Nodaway R., Old Channel | 297 | 1.50 | Mi. | Habitat Degradation |
| Nodaway R., Old Channel | 298 | 1.00 | Mi. | Habitat Degradation |
| Nodaway R., Old Channel | 299 | 2.50 | Mi. | Habitat Degradation |
| Nodaway R., Old Channel | 300 | 3.70 | Mi. | Habitat Degradation |
| Nodaway R., Old Channel | 304 | 2.50 | Mi. | Habitat Degradation |
| Nodaway R., Old Channel | 305 | 2.80 | Mi. | Habitat Degradation |
| Nodaway R., Old Channel | 311 | 1.00 | Mi. | Habitat Degradation |

| Waterbody | WBID | Size | Units | Potential Pollutant or Condition |
|---|---|---|---|---|
| Nodaway R., Trib. | 281 | 1.00 | Mi. | Habitat Degradation |
| North Branch Wilsons Cr. | 3811 | 3.80 | Mi. | Habitat Degradation |
| North Fabius R. | 59 | 1.00 | Mi. | Habitat Degradation |
| North Fork Middle Fabius R. | 65 | 28.20 | Mi. | Habitat Degradation |
| North Fork North Fabius R. | 58 | 9.00 | Mi. | Habitat Degradation |
| North Fork Salt R. | 113 | 17.20 | Mi. | Habitat Degradation |
| North Indian Cr., Trib. | 3261 | 1.30 | Mi. | Unknown (Biological Data) |
| North Mud Cr. | 540 | 6.20 | Mi. | Habitat Degradation |
| North Wyaconda R. | 49 | 9.20 | Mi. | Habitat Degradation |
| Norvey Cr. | 344 | 9.30 | Mi. | Habitat Degradation |
| Nulls Cr. | 175 | 5.80 | Mi. | Habitat Degradation |
| Old Mines Cr., Trib. | 2113 | 1.00 | Mi. | Habitat Degradation |
| Old Town Br. | 1331 | 7.00 | Mi. | Habitat Degradation |
| Old Town Br., Trib. | 3647 | 1.30 | Mi. | Habitat Degradation |
| Olive Br. | 3504 | 0.80 | Mi. | Habitat Degradation |
| One Hundred And Two R. | 342 | 74.50 | Mi. | Habitat Degradation, Atrazine |
| Opossum Cr. | 3190 | 6.00 | Mi. | Habitat Degradation, Low Dissolved Oxygen |
| Osage Fk. | 1472 | 69.00 | Mi. | Bacteria |
| Otter Cr. | 525 | 2.00 | Mi. | Habitat Degradation |
| Palmer Cr. | 357 | 12.20 | Mi. | Habitat Degradation |
| Palmer Cr. | 358 | 2.80 | Mi. | Habitat Degradation |
| Palmer Lake | 7441 | 102.00 | Ac. | Mercury (Fish Tissue) |
| Panther Cr. | 460 | 4.80 | Mi. | Habitat Degradation |
| Panther Cr. | 521 | 5.00 | Mi. | Habitat Degradation |
| Panther Cr., Trib. | 522 | 2.40 | Mi. | Habitat Degradation |
| Paris Br. | 176 | 3.00 | Mi. | Habitat Degradation |
| Peddler Cr. | 469 | 1.50 | Mi. | Habitat Degradation |
| Peddler Cr. | 470 | 3.00 | Mi. | Habitat Degradation |
| Pedlar Cr. | 283 | 5.40 | Mi. | Habitat Degradation |
| Peno Cr. | 99 | 14.40 | Mi. | Low Dissolved Oxygen |
| Peruque Cr. | 218 | 10.90 | Mi. | Habitat Degradation |
| Pigeon Cr. | 349 | 7.20 | Mi. | Habitat Degradation |
| Pike Creek Ditch | 2813 | 4.00 | Mi. | Habitat Degradation |
| Pilot Grove Cr. | 439 | 5.40 | Mi. | Habitat Degradation |
| Pine Cr. | 2692 | 1.00 | Mi. | Unknown (Biological Data) |
| Platte R., Old Channel | 325 | 3.40 | Mi. | Habitat Degradation |
| Platte R., Old Channel | 326 | 2.20 | Mi. | Habitat Degradation |
| Platte R., Old Channel | 332 | 4.00 | Mi. | Habitat Degradation |
| Platte R., Old Channel | 341 | 5.00 | Mi. | Habitat Degradation |
| Platte R., Old Channel | 348 | 1.00 | Mi. | Habitat Degradation |
| Plattin Cr. | 1728 | 19.90 | Mi. | Low Dissolved Oxygen |
| Polecat Cr. | 445 | 11.10 | Mi. | Habitat Degradation |
| Pomme Cr. | 2192 | 1.80 | Mi. | Habitat Degradation |
| Pond Cr. | 2127 | 1.30 | Mi. | Sedimentation |
| Poor Br. | 195 | 3.00 | Mi. | Habitat Degradation |
| Prairie Cr. | 313 | 3.70 | Mi. | Habitat Degradation |
| Prairie Cr., Trib. | 314 | 1.00 | Mi. | Habitat Degradation |

| Waterbody | WBID | Size | Units | Potential Pollutant or Condition |
|---|---|---|---|---|
| Rattlesnake Cr. | 520 | 3.00 | Mi. | Habitat Degradation |
| Red Oak Cr. | 2037 | 5.20 | Mi. | Low Dissolved Oxygen |
| Reese Fk. | 136 | 7.00 | Mi. | Habitat Degradation |
| Reid Cr. | 168 | 2.00 | Mi. | Habitat Degradation |
| Ricky Cr. | 1237 | 6.00 | Mi. | Habitat Degradation |
| Riggin Br. | 347 | 1.90 | Mi. | Habitat Degradation |
| Rock Cr. | 78 | 4.00 | Mi. | Habitat Degradation |
| Rock Cr. | 236 | 2.20 | Mi. | Habitat Degradation |
| Rock Cr. | 237 | 19.00 | Mi. | Habitat Degradation |
| Rocky Fk. | 378 | 4.00 | Mi. | Habitat Degradation |
| Rollins Cr. | 382 | 7.00 | Mi. | Habitat Degradation |
| Rush Cr. | 278 | 4.50 | Mi. | Habitat Degradation |
| Saline Cr. | 2189 | 1.80 | Mi. | Low Dissolved Oxygen |
| Saline Cr. | 2190 | 2.30 | Mi. | Low Dissolved Oxygen |
| Salt Br. | 413 | 5.70 | Mi. | Habitat Degradation |
| Sampson Cr. | 453 | 13.50 | Mi. | Habitat Degradation |
| Sampson Cr. | 455 | 5.60 | Mi. | Habitat Degradation |
| Sand Cr. | 290 | 4.90 | Mi. | Habitat Degradation |
| Sand Run | 206 | 2.00 | Mi. | Habitat Degradation |
| Sandy Cr. | 183 | 6.00 | Mi. | Habitat Degradation |
| Second Cr. | 317 | 11.50 | Mi. | Habitat Degradation |
| Shackelford Br. | 385 | 5.90 | Mi. | Habitat Degradation |
| Shady Cr. | 172 | 9.40 | Mi. | Habitat Degradation |
| Shain Cr. | 450 | 13.00 | Mi. | Habitat Degradation |
| Shays Cr. | 2865 | 1.70 | Mi. | Lead, Arsenic (Sediment) |
| Sheep Cr. | 530 | 1.00 | Mi. | Habitat Degradation |
| Shell Br. | 105 | 2.50 | Mi. | Habitat Degradation |
| Shipley Slough | 2971 | 2.50 | Mi. | Habitat Degradation |
| Shoal Cr. | 396 | 10.30 | Mi. | Habitat Degradation |
| Shoal Cr. | 397 | 10.60 | Mi. | Habitat Degradation |
| Shoal Cr. | 518 | 54.60 | Mi. | Habitat Degradation |
| Shoal Cr. | 1934 | 7.70 | Mi. | Habitat Degradation |
| Shoal Cr. | 3229 | 0.50 | Mi. | Bacteria |
| Shoal Creek Ditch | 519 | 9.80 | Mi. | Habitat Degradation |
| Silver Cr. | 3244 | 1.90 | Mi. | Zinc (Sediment) |
| Sitton Br. | 173 | 0.80 | Mi. | Habitat Degradation |
| Sitton Br. | 174 | 2.80 | Mi. | Habitat Degradation |
| Smith Fork | 353 | 3.00 | Mi. | Habitat Degradation |
| Sni-A-Bar Cr. | 401 | 4.30 | Mi. | Habitat Degradation, Low Dissolved Oxygen |
| Snyder Ditch | 2775 | 6.50 | Mi. | Habitat Degradation |
| South Big Cr. | 506 | 5.60 | Mi. | Habitat Degradation |
| South Brush Cr. | 108 | 2.00 | Mi. | Habitat Degradation |
| South Cr. | 3369 | 3.80 | Mi. | Bacteria |
| South Fork Blackwater R. | 921 | 5.70 | Mi. | Habitat Degradation |
| South Fork Clear Cr. | 293 | 6.00 | Mi. | Habitat Degradation |
| South Fork Middle Fabius R. | 67 | 14.80 | Mi. | Habitat Degradation |
| South Fork Middle Fabius R. | 68 | 13.00 | Mi. | Habitat Degradation |

| Waterbody | WBID | Size | Units | Potential Pollutant or Condition |
|---|---|---|---|---|
| South Fork North Fabius R. | 60 | 11.50 | Mi. | Habitat Degradation |
| South Fork North Fabius R., Trib. | 61 | 4.10 | Mi. | Habitat Degradation |
| South Fork Salt R., Trib. | 146 | 0.50 | Mi. | Habitat Degradation |
| South Fork South Fabius R. | 76 | 7.90 | Mi. | Habitat Degradation |
| South Fork South Fabius R. | 77 | 18.30 | Mi. | Habitat Degradation |
| South Mud Cr. | 542 | 3.80 | Mi. | Habitat Degradation |
| South R. | 3 | 16.30 | Mi. | Unknown (Biological Data) |
| South Wyaconda R. | 51 | 17.50 | Mi. | Habitat Degradation |
| Spring R. | 3159 | 0.50 | Mi. | Bacteria, Metals (Sediments) |
| Spring R. | 3167 | 1.00 | Mi. | Bacteria |
| Squaw Cr. | 252 | 21.00 | Mi. | Habitat Degradation |
| Stahl Cr. | 3176 | 7.30 | Mi. | E. coli |
| Steins Cr. | 1486 | 16.60 | Mi. | Habitat Degradation |
| Stillcamp Ditch | 2810 | 12.30 | Mi. | Habitat Degradation |
| Stillhouse Br. | 489 | 2.00 | Mi. | Habitat Degradation |
| Sugar Cr. | 156 | 11.00 | Mi. | Habitat Degradation |
| Sugar Cr. | 270 | 3.00 | Mi. | Habitat Degradation |
| Sugar Cr. | 271 | 6.50 | Mi. | Habitat Degradation |
| Sulphur Cr. | 169 | 9.30 | Mi. | Habitat Degradation |
| Sweetwater Br. | 2866 | 1.00 | Mi. | Lead, Cadmium (Sediment) |
| Sweetwater Br. | 2867 | 1.70 | Mi. | Lead, Cadmium (Sediment) |
| Sweetwater Br., Trib. | 2868 | 1.00 | Mi. | Lead (Sediment) |
| Tabo Cr. | 405 | 11.40 | Mi. | Habitat Degradation |
| Tabo Cr. | 406 | 8.40 | Mi. | Habitat Degradation |
| Tarkio R. | 242 | 33.50 | Mi. | Habitat Degradation |
| Thompson Br. | 458 | 1.00 | Mi. | Habitat Degradation |
| Thompson Cr. | 437 | 1.60 | Mi. | Habitat Degradation |
| Tobin Cr. | 64 | 8.00 | Mi. | Habitat Degradation |
| Troublesome Cr. | 73 | 4.80 | Mi. | Unknown (Biological Data) |
| Tub Cr. | 534 | 1.00 | Mi. | Habitat Degradation |
| Turkey Cr. | 138 | 2.00 | Mi. | Habitat Degradation |
| Turkey Cr. | 361 | 5.00 | Mi. | Habitat Degradation |
| Turkey Cr. | 362 | 3.50 | Mi. | Habitat Degradation |
| Turkey Cr. | 486 | 1.50 | Mi. | Habitat Degradation |
| Turkey Cr. | 523 | 2.50 | Mi. | Habitat Degradation |
| Turkey Cr. | 199 | 12.00 | Mi. | Habitat Degradation |
| Turkey Cr., Trib. | 524 | 1.00 | Mi. | Habitat Degradation |
| Unity Village Lake #2 | 7099 | 26.00 | Ac. | Mercury (Fish Tissue) |
| Van Meter Ditch | 412 | 4.50 | Mi. | Habitat Degradation |
| Wakenda Cr. | 360 | 29.20 | Mi. | Habitat Degradation |
| Wakenda Cr. | 364 | 10.60 | Mi. | Habitat Degradation |
| Wakenda Cr., Old Channel | 368 | 3.00 | Mi. | Habitat Degradation |
| Walnut Cr. | 1339 | 2.30 | Mi. | Low Dissolved Oxygen |
| Walnut Fork | 487 | 4.30 | Mi. | Habitat Degradation |
| Wamsley Cr. | 505 | 1.70 | Mi. | Habitat Degradation |
| Weldon Br. | 459 | 4.40 | Mi. | Habitat Degradation |
| West Fork Big Cr. | 449 | 18.00 | Mi. | Habitat Degradation |

| Waterbody | WBID | Size | Units | Potential Pollutant or Condition |
|---|---|---|---|---|
| West Fork Crooked R. | 379 | 6.60 | Mi. | Habitat Degradation |
| West Fork Crooked R. | 380 | 9.80 | Mi. | Habitat Degradation |
| West Fork Cuivre R. | 177 | 42.40 | Mi. | Habitat Degradation |
| West Fork Cuivre R. | 185 | 23.90 | Mi. | Habitat Degradation |
| West Fork Lost Cr. | 499 | 11.70 | Mi. | Habitat Degradation |
| West Fork Lost Cr., Trib. | 500 | 2.80 | Mi. | Habitat Degradation |
| West Fork Lost Cr., Trib. | 501 | 2.60 | Mi. | Habitat Degradation |
| West Fork Postoak Cr. | 929 | 12.80 | Mi. | Habitat Degradation |
| West Fork Wakenda Cr. | 366 | 3.30 | Mi. | Habitat Degradation |
| West Fork Wakenda Cr. | 367 | 7.80 | Mi. | Habitat Degradation |
| West High Cr. | 230 | 2.80 | Mi. | Habitat Degradation |
| West Tarkio Cr. | 244 | 1.20 | Mi. | Habitat Degradation |
| West Tarkio Cr. | 246 | 9.60 | Mi. | Habitat Degradation |
| Wheeler Cr. | 503 | 2.40 | Mi. | Habitat Degradation |
| Whitcomb Br. | 200 | 2.50 | Mi. | Habitat Degradation |
| White Cloud Cr. | 346 | 12.80 | Mi. | Habitat Degradation |
| White Oak Cr. | 454 | 9.00 | Mi. | Habitat Degradation |
| White Oak Cr. | 190 | 2.60 | Mi. | Habitat Degradation |
| Wildcat Cr. | 259 | 4.00 | Mi. | Habitat Degradation |
| Wildcat Cr. | 480 | 6.20 | Mi. | Habitat Degradation |
| Wildcat Cr. | 482 | 7.40 | Mi. | Habitat Degradation |
| Wildcat Cr., Trib. | 481 | 2.00 | Mi. | Habitat Degradation |
| Wildcat Cr., Trib. | 484 | 2.00 | Mi. | Habitat Degradation |
| Williams Cr. | 387 | 9.10 | Mi. | Unknown (Biological Data) |
| Willow Cr. | 381 | 6.50 | Mi. | Habitat Degradation |
| Willow Cr. | 498 | 1.00 | Mi. | Habitat Degradation |
| Willow Cr. | 543 | 1.50 | Mi. | Habitat Degradation |
| Winn Br. | 122 | 5.00 | Mi. | Habitat Degradation |
| Wolf Cr. | 191 | 4.50 | Mi. | Habitat Degradation |
| Wolf Cr., Trib. | 3589 | 1.50 | Mi. | Low Dissolved Oxygen |
| Wyaconda R. | 47 | 42.20 | Mi. | Habitat Degradation |
| Yeater Br. | 210 | 2.60 | Mi. | Habitat Degradation |
| Zadie Cr. | 448 | 5.30 | Mi. | Habitat Degradation |
| Zounds Br. | 479 | 3.00 | Mi. | Habitat Degradation |

## Appendix II
## Total Maximum Daily Load Completion Schedule

Table 17. Tentative Schedule for the Completion of Total Maximum Daily Load Studies.

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2012 | Big River | 2080 | P | 18.6 | 68 | St. Francois | Zinc (S) | 1G |
| 2012 | Big River | 2080 | P | 18.6 | 68 | St. Francois | Cadmium (S) | 1G |
| 2012 | Blue River | 417 | P | 4.4 | 4.4 | Jackson | Bacteria | 2 |
| 2012 | Blue River | 418 | P | 9.4 | 9.4 | Jackson | Bacteria | 2 |
| 2012 | Blue River | 419 | P | 7.7 | 7.7 | Jackson | Bacteria | 2,5 |
| 2012 | Blue River | 421 | C | 12 | 12 | Jackson | Bacteria | 2 |
| 2012 | Bonne Femme Creek | 750 | P | 7.8 | 7.8 | Boone | Bacteria | 2 |
| 2012 | Capps Creek | 3234 | P | 5 | 5 | Barry | Bacteria | 2 |
| 2012 | Center Creek | 3203 | P | 12.8 | 26.8 | Jasper | Bacteria | 2 |
| 2012 | Center Creek | 3214 | P | 4.9 | 4.9 | Lawrence/Newton | Bacteria | 2 |
| 2012 | Center Creek | 3210 | P | 21 | 21 | Newton/Jasper | Bacteria | 2 |
| 2012 | Clear Creek | 3238 | P | 11.1 | 11.1 | Barry/Newton | Bacteria | 2 |
| 2012 | Coldwater Creek | 1706 | C | 6.9 | 6.9 | St. Louis | Bacteria | 2 |
| 2012 | Creve Coeur Creek | 1703 | C | 3.8 | 3.8 | St. Louis | Bacteria | 2 |
| 2012 | Dry Branch | 3189 | C | 10.2 | 10.2 | Jasper | Bacteria | 2 |
| 2012 | East Fork Locust Creek | 608 | P | 16.7 | 16.7 | Sullivan | Bacteria | 2 |
| 2012 | East Fork Locust Creek | 610 | C | 0.4 | 15.7 | Sullivan | Bacteria | 2 |
| 2012 | East Fork Locust Creek | 610 | C | 15.3 | 15.7 | Sullivan | Bacteria | 2 |
| 2012 | Eaton Branch | 2166 | C | 0.9 | 1.2 | St. Francois | Zinc (W) | 1 |
| 2012 | Eaton Branch | 2166 | C | 0.9 | 1.2 | St. Francois | Cadmium (W) | 1 |
| 2012 | Eaton Branch | 2166 | C | 0.9 | 1.2 | St. Francois | Zinc (S) | 1G |
| 2012 | Eaton Branch | 2166 | C | 0.9 | 1.2 | St. Francois | Lead (S) | 1G |
| 2012 | Eaton Branch | 2166 | C | 0.9 | 1.2 | St. Francois | Cadmium (S) | 1G |
| 2012 | Fishpot Creek | 2186 | P | 3.5 | 3.5 | St. Louis | Bacteria | 2 |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2012 | Flat River Creek | 2168 | C | 5 | 10 | St. Francois | Cadmium (W) | 1 |
| 2012 | Flat River Creek Tributary | 2168U | U | n/a | n/a | St. Francois | Zinc(W) | 1 |
| 2012 | Grand Glaize Creek | 2184 | C | 4 | 4 | St. Louis | Bacteria | 2 |
| 2012 | Grand River | 593 | P | 56 | 56 | Livingston/Chariton | Bacteria | 2 |
| 2012 | Gravois Creek | 1712 | P | 2.3 | 2.3 | St. Louis | Bacteria | 2 |
| 2012 | Gravois Creek | 1713 | C | 6 | 6 | St. Louis | Bacteria | 2 |
| 2012 | Grindstone Creek | 1009 | C | 1.5 | 2.5 | Boone | Bacteria | 2 |
| 2012 | Hickory Creek | 3226 | P | 4.9 | 4.9 | Newton | Bacteria | 2 |
| 2012 | Hinkson Creek | 1008 | C | 18.8 | 18.8 | Boone | Bacteria | 2 |
| 2012 | Honey Creek | 3169 | P | 16.5 | 16.5 | Lawrence | Bacteria | 2 |
| 2012 | Honey Creek | 3170 | C | 2.7 | 2.7 | Lawrence | Bacteria | 2 |
| 2012 | Indian Creek | 420 | C | 3.4 | 3.4 | Jackson | Bacteria | 2 |
| 2012 | Little Medicine Creek | 623 | P | 39.8 | 39.8 | Mercer/Grundy | Bacteria | 2 |
| 2012 | Locust Creek | 606 | P | 36.4 | 91.7 | Putnam/Sullivan | Bacteria | 2,5 |
| 2012 | Medicine Creek | 619 | P | 43.8 | 43.8 | Putnam/Grundy | Bacteria | 2 |
| 2012 | Meramec River | 2183 | P | 22.8 | 22.8 | St. Louis | Lead (S) | 1G |
| 2012 | Meramec River | 2185 | P | 15.7 | 15.7 | St. Louis | Lead (S) | 1G |
| 2012 | Missouri River | 226 | P | 184.5 | 184.5 | Atchison/Jackson | Bacteria | 2 |
| 2012 | Missouri River | 1604 | P | 104.5 | 104.5 | St. Louis/ Gasconade | Bacteria | 2 |
| 2012 | North Fork Spring River | 3186 | P | 17.4 | 17.4 | Barton | Bacteria | 2 |
| 2012 | North Fork Spring River | 3188 | C | 55.9 | 55.9 | Dade/Jasper | Bacteria | 2 |
| 2012 | Old Mines Creek, Tributary | 2114 | C | 0.9 | 1.5 | Washington | Sediment | 1 |
| 2012 | Shaw Branch | 2170 | C | 1.2 | 1.2 | St. Francois | Cadmium (S) | 1G |
| 2012 | Shoal Creek | 3222 | P | 41.1 | 41.1 | Newton | Bacteria | 2 |
| 2012 | Spring River | 3164 | P | 8.8 | 8.8 | Lawrence | Bacteria | 2 |
| 2012 | Spring River | 3165 | P | 11.9 | 11.9 | Lawrence | Bacteria | 2 |
| 2012 | Spring River | 3160 | P | 61.7 | 61.7 | Lawrence/Jasper | Bacteria | 2 |
| 2012 | Sugar Lake (Lewis and Clark State Park) | 7067 | L3 | 403 | 403 | Buchanan | Bacteria | 2 |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2012 | Truitt Creek | 3175 | C | 6.4 | 6.4 | Lawrence | Bacteria | 2 |
| 2012 | Turkey Creek | 3282 | P | 1.2 | 2.4 | St. Francois | Zinc (W) | 1 |
| 2012 | Turkey Creek | 3282 | P | 2.4 | 2.4 | St. Francois | Lead (W) | 1 |
| 2012 | Turkey Creek | 3282 | P | 2.4 | 2.4 | St. Francois | Cadmium (W) | 1 |
| 2012 | Turkey Creek | 3216 | P | 7.7 | 7.7 | Jasper | Bacteria | 2 |
| 2012 | Turkey Creek | 3217 | P | 6.1 | 6.1 | Jasper | Bacteria | 2 |
| 2012 | Watkins Creek | 1708 | C | 1.4 | 1.4 | St. Louis | Bacteria | 2 |
| 2012 | White Oak Creek | 3182 | C | 18 | 18 | Lawrence/Jasper | Bacteria | 2 |
| 2012 | Williams Creek | 3171 | P | 1 | 1 | Lawrence | Bacteria | 2 |
| 2012 | Williams Creek | 3172 | P | 8.5 | 8.5 | Lawrence | Bacteria | 2 |
| 2013 | Baldwin Park Tributary (to Chat Creek) | 3168U | U | n/a | n/a | Lawrence | Zinc (W) | 1G |
| 2013 | Bee Fork | 2760 | C | 0.9 | 8.5 | Reynolds | Lead (S) | 1 |
| 2013 | Bee Fork | 2760 | C | 8.5 | 8.5 | Reynolds | Lead | 1 |
| 2013 | Bee Fork | 2760U-01 | U | 0.3 | n/a | Reynolds | Lead (S) | 1G |
| 2013 | Center Creek | 3203 | P | 12.8 | 26.8 | Jasper | Cadmium (W) | 1 |
| 2013 | Center Creek | 3203 | P | 12.8 | 26.8 | Jasper | Zinc (S) | 1G |
| 2013 | Center Creek | 3203 | P | 12.8 | 26.8 | Jasper | Lead (S) | 1G |
| 2013 | Center Creek | 3203 | P | 12.8 | 26.8 | Jasper | Cadmium (S) | 1G |
| 2013 | Chat Creek (formerly Douger Br.) | 3168 | C | 1 | 2.1 | Lawrence | Cadmium (W) | 1 |
| 2013 | Chat Creek (formerly Douger Br.) | 3168 | C | 1 | 2.1 | Lawrence | Zinc (S) | 1G |
| 2013 | Chat Creek (formerly Douger Br.) | 3168 | C | 1 | 2.1 | Lawrence | Lead (S) | 1G |
| 2013 | Courtois Creek | 1943 | P | 2.6 | 32 | Washington | Metals*** (S) | 1G |
| 2013 | Dousinbury Creek | 1180 | P | 3.9 | 3.9 | Dallas | Bacteria | 2 |
| 2013 | East Fork Grand River | 457 | P | 28.7 | 28.7 | Worth/Gentry | Bacteria | 2 |
| 2013 | Indian Creek | 3256 | P | 5 | 30.8 | Newton | Bacteria | 2 |
| 2013 | Kiefer Creek | 3592 | P | 1.2 | 1.2 | St. Louis | Bacteria | 2 |
| 2013 | Lake Ste. Louise | 7055 | L3 | 71 | 71 | St. Charles | Bacteria | 2 |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2013 | Lone Elm Hollow | 3216U | U | 1.4 | n/a | Jasper | Metals | 1G |
| 2013 | Lost Creek | 3278 | P | 8.5 | 8.5 | Newton | Bacteria | 2 |
| 2013 | Middle Fork Grand River | 468 | P | 27.5 | 27.5 | Worth/Gentry | Bacteria | 2 |
| 2013 | Middle Indian Creek | 3263 | P | 2.2 | 2.2 | Newton | Bacteria | 2 |
| 2013 | No Creek | 550 | P | 28.7 | 28.7 | Grundy/Livingston | Bacteria | 2 |
| 2013 | North Indian Creek | 3260 | P | 5.2 | 5.2 | Newton | Bacteria | 2 |
| 2013 | Pearson Creek | 2373 | P | 2 | 8 | Greene | Bacteria | 2 |
| 2013 | South Grand River | 1249 | P | 66.8 | 66.8 | Cass/Henry | Bacteria | 2 |
| 2013 | South Indian Creek | 3259 | P | 8.7 | 8.7 | McDonald/Newton | Bacteria | 2 |
| 2013 | Strother Creek | 2751 | P | 2.1 | 6 | Iron | Zinc (W) | 1G |
| 2013 | Strother Creek | 2751 | P | 2.1 | 6 | Iron | Zinc (S) | 1G |
| 2013 | Strother Creek | 2751 | P | 2.1 | 6 | Iron | Nickel (S) | 1G |
| 2013 | Strother Creek | 2751 | P | 2.1 | 6 | Iron | Lead (W) | 1G |
| 2013 | Strother Creek | 2751 | P | 2.1 | 6 | Iron | Lead (S) | 1G |
| 2013 | Strother Creek | 2751U-01 | U | 1 | n/a | Reynolds/Iron | Zinc (S) | 1G |
| 2013 | Strother Creek | 2751U-01 | U | 1 | n/a | Reynolds/Iron | Nickel (S) | 1G |
| 2013 | Strother Creek | 2751U-01 | U | 1 | n/a | Reynolds/Iron | Lead (S) | 1G |
| 2013 | Strother Creek | 2751U-01 | U | 1 | n/a | Reynolds/Iron | Arsenic (S) | 1G |
| 2013 | Thompson River | 549 | P | 5 | 70.6 | Harrison | Bacteria | 2 |
| 2013 | Turkey Creek | 3216 | P | 7.7 | 7.7 | Jasper | Cadmium (W) | 1 |
| 2013 | Turkey Creek | 3216 | P | 7.7 | 7.7 | Jasper | Zinc (S) | 1G |
| 2013 | Turkey Creek | 3217 | P | 6.1 | 6.1 | Jasper | Zinc (S) | 1G |
| 2013 | Turkey Creek | 3216 | P | 7.7 | 7.7 | Jasper | Lead (S) | 1G |
| 2013 | Turkey Creek | 3217 | P | 6.1 | 6.1 | Jasper | Lead (S) | 1G |
| 2013 | Turkey Creek | 3216 | P | 7.7 | 7.7 | Jasper | Cadmium (S) | 1G |
| 2013 | Turkey Creek | 3217 | P | 6.1 | 6.1 | Jasper | Cadmium (S) | 1G |
| 2013 | Weldon River | 560 | P | 43.4 | 43.4 | Mercer/Grundy | Bacteria | 2 |
| 2013 | West Fork Black River | 2755 | P | 1.3 | 32.3 | Reynolds | Nickel (S) | 1G |
| 2013 | West Fork Black River | 2755 | P | 1.3 | 32.3 | Reynolds | Lead (S) | 1G |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2013 | Wilson Creek | 2375 | P | 1 | 14 | Greene | Bacteria | 2 |
| 2014 | Castor River | 2288 | P | 7.5 | 7.5 | Bollinger | Bacteria | 2 |
| 2014 | Coldwater Creek | 1706 | C | 6.9 | 6.9 | St. Louis | Chloride | 1 |
| 2014 | Creve Coeur Creek | 1703 | C | 3.8 | 3.8 | St. Louis | Chloride | 1 |
| 2014 | Crooked Creek | 1928 | P | 3.5 | 3.5 | Dent/Crawford | Cadmium (W) | 1 |
| 2014 | Crooked Creek | 1928 | P | 3.5 | 3.5 | Dent/Crawford | Lead (S) | 1G |
| 2014 | Crooked Creek | 1928 | P | 3.5 | 3.5 | Dent/Crawford | Cadmium (S) | 1G |
| 2014 | Crooked Creek | 1928U-01 | U | 5.2 | n/a | Iron/Dent | Copper (W) | 1G |
| 2014 | Crooked Creek | 1928U-01 | U | 5.2 | n/a | Iron/Dent | Cadmium (W) | 1G |
| 2014 | Grand Glaize Creek | 2184 | C | 4 | 4 | St. Louis | Chloride | 1 |
| 2014 | Gravois Creek | 1712 | P | 2.3 | 2.3 | St. Louis | Chloride | 1 |
| 2014 | Gravois Creek | 1713 | C | 6 | 6 | St. Louis | Chloride | 1 |
| 2014 | Indian Creek | 420 | C | 3.4 | 3.4 | Jackson | Chloride | 1 |
| 2014 | Lamine River | 847 | P | 64 | 64 | Morgan/Cooper | Bacteria | 2 |
| 2014 | Lateral #2 Main Ditch | 3105 | P | 11.5 | 11.5 | Stoddard | Temperature | 1 |
| 2014 | Little Medicine Creek | 623 | P | 20 | 39.8 | Mercer/Grundy | Unknown | 1G |
| 2014 | Little Muddy Creek, Tributary to | 3490 | C | 1 | 1 | Pettis | Chloride | 1 |
| 2014 | Little Muddy Creek, Tributary to | 3490 | C | 1 | 1 | Pettis | Color | G |
| 2014 | Little Osage River | 3652 | C | 23.6 | 23.6 | Vernon | Bacteria | 2 |
| 2014 | Meramec River | 2183 | P | 22.8 | 22.8 | St. Louis | Bacteria | 2 |
| 2014 | Muddy Creek | 853 | P | 39 | 62.2 | Pettis | Chloride | 1 |
| 2014 | Muddy Creek | 853 | P | 62.2 | 62.2 | Pettis | Unknown | 1G |
| 2014 | Muddy Creek | 853 | P | 1 | 62.2 | Pettis | Color | G |
| 2014 | Mussel Fork Creek | 674 | C | 29 | 29 | Sullivan/Macon | Bacteria | 2 |
| 2014 | Niangua River | 1170 | P | 56 | 56 | Dallas | Bacteria | 2 |
| 2014 | North Fork Cuivre River | 170 | C | 10 | 10 | Pike | Bacteria | 2 |
| 2014 | Peruque Creek | 217 | P | n/a | 4 | St. Charles | Inorganic Sediment | 1G |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2014 | Peruque Creek | 218 | C | n/a | 8 | St. Charles | Inorganic Sediment | 1G |
| 2014 | River des Peres | 1710 | C | 2.6 | 2.6 | St. Louis | Chloride | 1 |
| 2014 | River des Peres | 1710U-01 | U | 2.5 | n/a | St. Louis | Chloride | 1G |
| 2014 | South Fabius River | 71 | P | 80.6 | 80.6 | Knox/Marion | Bacteria | 2 |
| 2014 | St. Johns Ditch | 3138 | P | 15.3 | 15.3 | Scott/New Madrid | Bacteria | 2 |
| 2014 | Table Rock Lake, James, Kings and Long Creek Arms | 7313 | L2 | 25860 | 25860 | Stone | Nutrients | 2 |
| 2014 | Table Rock Lake, White River Arm | 7313 | L2 | 17240 | 17240 | Stone | Nitrogen | 1 |
| 2014 | Table Rock Lake, White River Arm | 7313 | L2 | 17240 | 17240 | Stone | Chlorophyll | 1 |
| 2014 | Warm Fork Spring River | 2579 | P | 1.2 | 13.8 | Oregon | Bacteria | 2 |
| 2014 | Watkins Creek | 1708 | C | 1.4 | 1.4 | St. Louis | Chloride | 1 |
| 2015 | Belcher Branch Lake | 7365 | L3 | 55 | 55 | Buchanan | Mercury (T) | 1G |
| 2015 | Bethany Lake | 7109 | L3 | 78 | 78 | Harrison | Mercury (T) | 1G |
| 2015 | Big Creek | 2916 | P | 3 | 34.1 | Wayne/Iron | Metals (S) | 1 |
| 2015 | Big Creek | 2916 | P | 3 | 34.1 | Wayne/Iron | Lead (S) | 1 |
| 2015 | Big Creek | 2916 | P | 3 | 34.1 | Wayne/Iron | Cadmium (S) | 1 |
| 2015 | Black River | 2784 | P | 39 | 39 | Wayne/Butler | Mercury (T) | 1G |
| 2015 | Blackberry Creek | 3184 | C | 3.5 | 6.5 | Jasper | Sulfate Chloride | 1 |
| 2015 | Blackberry Creek | 3184 | C | 3.5 | 6.5 | Jasper | Chloride | 1 |
| 2015 | Bourbeuse River | 2034 | P | 136.7 | 136.7 | Phelps/Franklin | Mercury (T) | 1G |
| 2015 | Busch Lake #35 | 7057 | L3 | 51 | 51 | St. Charles | Mercury (T) | 1G |
| 2015 | Busch Lake #37 | 7056U | U | 34 | 34 | St. Charles | Mercury (T) | 1G |
| 2015 | Cedar Creek | 737 | C | 7 | 37.4 | Callaway | Unknown | 1G |
| 2015 | Clearwater Lake | 7326 | L2 | 1635 | 1635 | Reynolds/Wayne | Mercury (T) | 1G |
| 2015 | Current River | 2636 | P | 124 | 124 | Shannon/Ripley | Mercury (T) | 1G |
| 2015 | Dardenne Creek | 221 | P | 16.5 | 16.5 | St. Charles | Unknown | 1G |
| 2015 | Dardenne Creek | 221 | P | 16.5 | 16.5 | St. Charles | Inorganic Sediment | 1G |
| 2015 | Deer Ridge Lake | 7015 | L3 | 39 | 39 | Lewis | Mercury (T) | 1G |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2015 | Des Moines River | 36 | P | 31.3 | 31.3 | Clark | Bacteria | 2 |
| 2015 | Eleven Point River | 2597 | P | 11.4 | 11.4 | Oregon | Mercury (T) | 1G |
| 2015 | Eleven Point River | 2601 | P | 22.3 | 22.3 | Oregon | Mercury (T) | 1G |
| 2015 | Fox River | 38 | P | 42 | 42 | Clark | Bacteria | 2 |
| 2015 | Foxboro Lake | 7382 | L3 | 22 | 22 | Franklin | Mercury (T) | 1G |
| 2015 | Frisco Lake (formerly Schuman Park Lake) | 7280 | L3 | 5 | 5 | Phelps | Mercury (T) | 1G |
| 2015 | Gasconade River | 1455 | P | 264 | 264 | Gasconade/Wright | Mercury (T) | 1G |
| 2015 | Goose Creek, Tributary | 1420 | C | 3 | 3 | Lawrence | Bacteria | 2 |
| 2015 | Grand Glaize Creek | 2184 | C | 4 | 4 | St. Louis | Mercury (T) | 1G |
| 2015 | Hazel Creek Lake | 7152 | L1 | 453 | 453 | Adair | Mercury (T) | 1G |
| 2015 | Hough Park Lake | 7388 | L3 | 10 | 10 | Cole | Mercury (T) | 1G |
| 2015 | Indian Creek Lake | 7389 | L3 | 185 | 185 | Livingston | Mercury (T) | 1G |
| 2015 | Knob Noster State Park Lakes (Lake Buteo) | 7196 | L3 | 10 | 24 | Johnson | Mercury (T) | 1G |
| 2015 | Lac Capri | 7297A | L3 | 112 | 112 | St. Francois | Nitrogen | 1 |
| 2015 | Lac Capri | 7297A | L3 | 112 | 112 | St. Francois | Chlorophyll | 1 |
| 2015 | Lake of the Woods | 7436 | L3 | 3 | 3 | Boone | Mercury (T) | 1G |
| 2015 | Lake of the Woods | 0419U-01 | U | 7 | n/a | Jackson | Mercury (T) | 1G |
| 2015 | Lake St. Louis | 7054 | L3 | 444 | 444 | St. Charles | Mercury (T) | 1 |
| 2015 | Lake Winnebago | 7212 | L3 | 272 | 272 | Cass | Mercury (T) | 1G |
| 2015 | Little Beaver Creek | 1529 | C | 3.3 | 3.5 | Phelps | Inorganic Sediment | 1G |
| 2015 | Little Lost Creek | 3279 | P | 5.8 | 5.8 | Newton | Bacteria | 2 |
| 2015 | Longview Lake | 7097 | L2 | 853 | 853 | Jackson | Mercury (T) | 1G |
| 2015 | Main Ditch | 2814 | C | 10 | 13 | Butler | Temperature | 1 |
| 2015 | Main Ditch | 2814 | C | 1 | 13 | Butler | pH | 1 |
| 2015 | Main Ditch | 2814 | C | 1 | 13 | Butler | Ammonia | 1 |
| 2015 | Marceline New Lake | 7136 | L1 | 200 | 200 | Chariton | Phosphorus | 1 |
| 2015 | Marceline New Lake | 7136 | L1 | 200 | 200 | Chariton | Nitrogen | 1 |
| 2015 | Marceline New Lake | 7136 | L1 | 200 | 200 | Chariton | Chlorophyll | 1 |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2015 | Mark Twain Lake | 7033 | L2 | 18132 | 18132 | Ralls | Mercury (T) | 1G |
| 2015 | Meramec River | 1841 | P | 76 | 76 | Franklin/Jefferson | Mercury (T) | 1G |
| 2015 | Monzingo Lake | 7402 | L1 | 898 | 898 | Nodaway | Mercury (T) | 1G |
| 2015 | Noblett Lake | 7316 | L3 | 26 | 26 | Douglas | Mercury (T) | 1G |
| 2015 | North Fork Spring River | 3188 | C | 1 | 55.9 | Dade/Jasper | Ammonia | 1 |
| 2015 | Phillips Lake | 1003U-01 | U | 32 | n/a | Boone | Mercury (T) | 1G |
| 2015 | Pickle Creek | 1755 | P | 7.8 | 7.8 | Ste. Genevieve | pH | 1 |
| 2015 | Pike Creek | 2815 | C | 1.3 | 6 | Butler | Temperature | 1 |
| 2015 | Salt River | 91 | P | 29 | 29 | Ralls/Pike | Mercury (T) | 1G |
| 2015 | Scroggins Branch | 2916U-01 | U | 0.5 | n/a | Iron | Zinc (W) | 1G |
| 2015 | Scroggins Branch | 2916U-01 | U | 0.5 | n/a | Iron | Cadmium (W) | 1G |
| 2015 | St. Johns Ditch | 3138 | P | 15.3 | 15.3 | Scott/New Madrid | Mercury (T) | 1G |
| 2015 | Sunset Lake (formerly McKay Park Lake) | 7399 | L3 | 6 | 6 | Cole | Mercury (T) | 1G |
| 2015 | Turnback Creek | 1414 | P | 19.9 | 19.9 | Lawrence/Dade | Bacteria | 2 |
| 2015 | Willow Branch | 3280 | P | 2.2 | 2.2 | Newton | Bacteria | 2 |
| 2016 | Big Creek | 444 | P | 6 | 22 | Harrison | Low D.O. | 1 |
| 2016 | Big Creek | 444 | P | 1 | 22 | Harrison | Ammonia | 1 |
| 2016 | Big Otter Creek, Tributary to | 1225 | C | 1 | 1 | Henry | Low D.O. | 1 |
| 2016 | Bobs Creek | 35 | C | 3.5 | 14.2 | Lincoln | Low D.O. | 1 |
| 2016 | Brush Creek | 1371 | P | 4.7 | 4.7 | Polk/St. Clair | Organic Sediment | 1 |
| 2016 | Brush Creek | 1371 | P | 4.7 | 4.7 | Polk/St. Clair | Low D.O. | 1 |
| 2016 | Burgher Branch | 1865 | C | 1.5 | 1.5 | Phelps | Low D.O. | 1 |
| 2016 | Clear Creek | 3239 | C | 3.5 | 3.5 | Barry/Newton | Nutrients | G |
| 2016 | Clear Creek | 3239 | C | 3.5 | 3.5 | Barry/Newton | Low D.O. | G |
| 2016 | Clear Fork | 935 | P | 3 | 25.8 | Johnson | Low D.O. | 1 |
| 2016 | Dark Creek | 690 | C | 9.1 | 9.1 | Randolph | Low D.O. | 1 |
| 2016 | Dutro Carter Creek | 3569 | P | 0.6 | 1.5 | Phelps | Low D.O. | 1 |
| 2016 | Dutro Carter Creek | 3569 | P | 0.9 | 1.5 | Phelps | Low D.O. | 1 |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2016 | East Fork Locust Creek | 610 | C | 15.3 | 15.7 | Sullivan | Low D.O. | 1 |
| 2016 | East Fork Tebo Creek | 1282 | C | 1 | 14.5 | Henry | Low D.O. | 1 |
| 2016 | Elm Branch | 1283 | C | 3 | 3 | Henry | Low D.O. | 1 |
| 2016 | Foster Creek | 0747U-01 | U | 0.5 | n/a | Boone | Ammonia | 1 |
| 2016 | Fowler Creek | 747 | C | 6 | 6 | Boone | Low D.O. | 1 |
| 2016 | Heath's Creek | 848 | P | 21 | 21 | Pettis | Low D.O. | 1 |
| 2016 | Little Dry Fork | 1863 | P | 1 | 5.2 | Phelps | Low D.O. | 1 |
| 2016 | Little Dry Fork | 1864 | C | 0.6 | 4.7 | Phelps | Low D.O. | 1 |
| 2016 | Little Dry Fork | 1864 | C | 3.9 | 4.7 | Phelps | Low D.O. | 1 |
| 2016 | Little Niangua River | 1189 | P | 20 | 43.8 | Dallas/Camden | Low D.O. | 1 |
| 2016 | Long Branch Creek | 696 | C | 2 | 14.8 | Macon | Low D.O. | 1 |
| 2016 | Miami Creek | 1299 | P | 19.6 | 19.6 | Bates | Low D.O. | 1 |
| 2016 | No Creek | 550 | P | 28.7 | 28.7 | Grundy/Livingston | Low D.O. | 1 |
| 2016 | North Fork Cuivre River | 170 | C | 10 | 10 | Pike | Low D.O. | 1 |
| 2016 | North Fork Spring River | 3188 | C | 55.9 | 55.9 | Dade/Jasper | Low D.O. | 1 |
| 2016 | Panther Creek | 1373 | C | 9.7 | 9.7 | St.Clair/Polk | Low D.O. | 1 |
| 2016 | Red Oak Creek | 2038 | C | 10 | 10 | Gasconade | Low D.O. | 1 |
| 2016 | Red Oak Creek, Tributary to | 3360 | P | 0.5 | 0.5 | Gasconade | Low D.O. | 1 |
| 2016 | Red Oak Creek, Tributary to | 3361 | C | 0.9 | 1.9 | Gasconade | Low D.O. | 1 |
| 2016 | Renfro Creek (a.k.a. Cedar Creek, Trib.) | 743 | C | 1.5 | 1.5 | Callaway | Low D.O. | 1 |
| 2016 | Richland Creek | 884 | C | 6.2 | 10 | Morgan | Low D.O. | 1 |
| 2016 | Salt Creek | 594 | C | 14.9 | 14.9 | Livingston/Chariton | Low D.O. | 1 |
| 2016 | Salt River | 91 | P | 29 | 29 | Ralls/Pike | Low D.O. | 1 |
| 2016 | Shoal Creek | 3231 | C | 5 | 5 | Barry | Low D.O. | 1 |
| 2016 | Sni-a-Bar Creek | 399 | P | 36.6 | 36.6 | Jackson/Lafayette | Low D.O. | 1 |
| 2016 | Straight Fork | 959 | C | 2.5 | 6 | Morgan | Low D.O. | 1 |
| 2016 | Sugar Creek | 686 | P | 6.8 | 6.8 | Randolph | Low D.O. | 1 |
| 2016 | Troublesome Creek | 74 | C | 41.3 | 41.3 | Knox/Marion | Low D.O. | 1 |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2016 | West Fork Sni-a-Bar | 400 | P | 9 | 9 | Jackson | Low D.O. | 1 |
| 2016 | Whetstone Creek | 1504 | P | 12.2 | 12.2 | Wright | Low D.O. | 1 |
| 2016 | Whetstone Creek | 1505U | U | 0.6 | n/a | Wright | Ammonia | 1G |
| 2016 | Willow Fork | 955 | C | 6.8 | 6.8 | Moniteau | Low D.O. | 1 |
| 2016 | Willow Fork, Tributary to | 956 | C | 0.5 | 0.5 | Moniteau | Low D.O. | 1 |
| 2016 | Wolf Creek | 2879 | C | 8 | 8.0 | St. Francois | Low D.O. | 1 |
| 2016 | Wolf Creek, Tributary to | 3589 | C | 1.5 | 1.5 | St. Francois | Low D.O. | 1 |
| 2017 | Atkinson Lake | 7234 | L3 | 434 | 434 | St. Clair | Phosphorus | 1 |
| 2017 | Big Piney River | 1578 | P | 4 | 7.8 | Texas | Low D.O. | 1 |
| 2017 | Coldwater Creek | 1706 | C | 4 | 6.9 | St. Louis | Low D.O. | 1 |
| 2017 | Coon Creek | 132 | C | 11.8 | 11.8 | Randolph/Monroe | Low D.O. | 1 |
| 2017 | Coon Creek, Tributary to | 133 | C | 2 | 2 | Randolph | Low D.O. | 1 |
| 2017 | Creve Coeur Creek | 1703 | C | 3.8 | 3.8 | St. Louis | Low D.O. | 1 |
| 2017 | Dardenne Creek | 219 | P1 | 7 | 7 | St. Charles | Low D.O. | 1 |
| 2017 | Dardenne Creek | 222 | C | 6 | 6 | St. Charles | Low D.O. | 1 |
| 2017 | Dardenne Creek | 221 | P | 16.5 | 16.5 | St. Charles | Low D.O. | 1G |
| 2017 | Ditch #36 | 3109 | P | 7.8 | 7.8 | Dunklin | Low D.O. | 1 |
| 2017 | East Fork Crooked River | 372 | P | 19.9 | 19.9 | Ray | Low D.O. | 1 |
| 2017 | Fishpot Creek | 2186 | P | 3.5 | 3.5 | St. Louis | Low D.O. | 1 |
| 2017 | Gravois Creek | 1713 | C | 6 | 6 | St. Louis | Low D.O. | 1 |
| 2017 | Lateral #2 Main Ditch | 3105 | P | 11.5 | 11.5 | Stoddard | Low D.O. | 1 |
| 2017 | Maline Creek | 1709 | C | 0.6 | 0.6 | St. Louis | Low D.O. | 1 |
| 2017 | Maple Slough Ditch | 3140 | C | 18.2 | 18.2 | Mississippi/New Madrid | Low D.O. | 1 |
| 2017 | McKenzie Creek | 2786 | P | 2.5 | 6 | Wayne | Low D.O. | 1 |
| 2017 | Middle Fork Salt River | 121 | P | 24.8 | 85.1 | Macon/Monroe | Low D.O. | 1 |
| 2017 | Pike Creek | 2815 | C | 1.3 | 6 | Butler | Low D.O. | 1 |
| 2017 | Pole Cat Slough (a.k.a. Ditch to Buffalo Ditch) | 3120 | P | 12.6 | 12.6 | Dunklin | Low D.O. | 1 |
| 2017 | Red Oak Creek, Tributary to | 3361 | C | 1 | 1.9 | Gasconade | Low D.O. | 1 |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2017 | River des Peres | 1710 | C | 2.6 | 2.6 | St. Louis | Low D.O. | 1 |
| 2017 | South Blackbird Creek | 655 | C | 5 | 13 | Putnam | Ammonia | 1 |
| 2017 | South Davis Creek | 913 | | 4.6 | 4.6 | Lafayette | Low D.O. | 1 |
| 2017 | South Fork Salt River | 142 | C | 17.9 | 40.1 | Callaway/Audrain | Low D.O. | 1 |
| 2017 | Stevenson Bayou | 3135 | C | 6.4 | 6.4 | Mississippi | Low D.O. | 1 |
| 2017 | Turkey Creek | 3282 | P | 1.2 | 2.4 | St. Francois | Low D.O. | 1 |
| 2018 | Atkinson Lake | 7234 | L3 | 434 | 434 | St. Clair | Chlorophyll | 1 |
| 2018 | Bilby Ranch Lake | 7368 | L3 | 95 | 95 | Nodaway | Chlorophyll | 1 |
| 2018 | Binder Lake | 7185 | L3 | 127 | 127 | Cole | Phosphorus | 1 |
| 2018 | Binder Lake | 7185 | L3 | 127 | 127 | Cole | Chlorophyll | 1 |
| 2018 | Brush Creek | 1372 | C | 5.5 | 5.5 | Polk | Low D.O. | 1 |
| 2018 | Cedar Creek | 1344 | P | 10 | 31 | Cedar | Unknown | 1G |
| 2018 | Cedar Creek | 1357 | C | 16.2 | 16.2 | Cedar | Unknown | 1G |
| 2018 | Cedar Creek | 1344 | P | 10 | 31 | Cedar | Low D.O. | 1 |
| 2018 | Cedar Creek | 1357 | C | 16.2 | 16.2 | Cedar | Low D.O. | 1 |
| 2018 | Clear Creek | 1336 | C | 22.3 | 22.3 | Vernon | Low D.O. | 1 |
| 2018 | Clear Creek | 1333 | P | 28.2 | 28.2 | Vernon/St. Clair | Low D.O. | 1 |
| 2018 | Fox Valley Lake | 7008 | L3 | 89 | 89 | Clark | Phosphorus | 1 |
| 2018 | Grand Glaize Creek | 2184 | C | 4 | 4 | St. Louis | Low D.O. | 1 |
| 2018 | Grindstone Reservoir | 7384 | L1 | 173 | 173 | DeKalb | Phosphorus | 1 |
| 2018 | Grindstone Reservoir | 7384 | L1 | 173 | 173 | DeKalb | Nitrogen | 1 |
| 2018 | Grindstone Reservoir | 7384 | L1 | 173 | 173 | DeKalb | Chlorophyll | 1 |
| 2018 | Harrison County Lake | 7386 | L1 | 280 | 280 | Harrison | Phosphorus | 1 |
| 2018 | Harrison County Lake | 7386 | L1 | 280 | 280 | Harrison | Chlorophyll | 1 |
| 2018 | Hazel Hill Lake | 7387 | L3 | 62 | 62 | Johnson | Chlorophyll | 1 |
| 2018 | Horse Creek | 1348 | P | 27.7 | 27.7 | Cedar | Unknown | 1G |
| 2018 | Horse Creek | 1348 | P | 27.7 | 27.7 | Cedar | Low D.O. | 1 |
| 2018 | Indian Creek | 3256 | P | 5 | 30.8 | Newton | Unknown | 1 |
| 2018 | Indian Creek | 1747 | C | 3.6 | 3.6 | St. Genevieve | Low D.O. | 1 |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2018 | Kraut Run Lake | 7056 | L3 | 164 | 164 | St. Charles | Phosphorus | 1 |
| 2018 | Kraut Run Lake | 7056 | L3 | 164 | 164 | St. Charles | Chlorophyll | 1 |
| 2018 | La Belle Lake No. 2 | 7023 | L1 | 98 | 98 | Lewis | Phosphorus | 1 |
| 2018 | La Belle Lake No. 2 | 7023 | L1 | 98 | 98 | Lewis | Chlorophyll | 1 |
| 2018 | Lake Jacomo | 7101 | L3 | 998 | 998 | Jackson | Chlorophyll | 1 |
| 2018 | Lake of the Ozarks, Niangua Arm | 7205 | L2 | 7600 | 59520 | Camden | Phosphorus | 1 |
| 2018 | Lake of the Ozarks, Osage Arm | 7205 | L2 | 38920 | 59520 | Camden | Nitrogen | 1 |
| 2018 | Lewistown Lake | 7020 | L1 | 29 | 29 | Lewis | Atrazine | |
| 2018 | Little Drywood Creek | 1326 | C | 15.6 | 15.6 | Barton/Vernon | Low D.O. | 1 |
| 2018 | Little Drywood Creek | 1325 | P | 20.5 | 20.5 | Vernon | Low D.O. | 1 |
| 2018 | Middle Indian Creek | 3262 | C | 3.5 | 3.5 | Newton | Unknown | 1 |
| 2018 | Middle Indian Creek | 3263 | P | 2.2 | 2.2 | Newton | Unknown | 1 |
| 2018 | Nodaway River | 279 | P | 59.3 | 59.3 | Nodaway | Bacteria | 2 |
| 2018 | North Moreau Creek | 942 | P | 11.6 | 47.9 | Moniteau | Low D.O. | 1 |
| 2018 | Osage River | 1031 | P | 10 | 81.9 | Osage/Miller | Total Dissolved Gas | 1 |
| 2018 | Osage River | 1293 | P | 45.5 | 45.5 | Vernon/St. Clair | Low D.O. | * |
| 2018 | Petite Saline Creek | 785 | P | 21 | 21 | Cooper/Moniteau | Low D.O. | 1 |
| 2018 | Platte River | 312 | P | 142.2 | 142.2 | Worth/Platte | Bacteria | 2 |
| 2018 | Sadler Branch | 3577 | C | 0.8 | 0.8 | Polk | Low D.O. | 1 |
| 2018 | Stockton Branch | 1361 | C | 1 | 3.6 | Cedar | Low D.O. | 1 |
| 2018 | Todd Creek | 316 | C | 5.7 | 9.9 | Platte | Low D.O. | 1 |
| 2018 | Weatherby Lake | 7071 | L3 | 185 | 185 | Platte | Nitrogen | 1 |
| 2018 | West Fork Drywood Creek | 1317 | C | 8.1 | 8.1 | Vernon | Low D.O. | 1 |
| 2019 | Forest Lake | 7151 | L1 | 580 | 580 | Adair | Phosphorus | 1 |
| 2019 | Forest Lake | 7151 | L1 | 580 | 580 | Adair | Nitrogen | 1 |
| 2019 | Forest Lake | 7151 | L1 | 580 | 580 | Adair | Chlorophyll | 1 |
| 2019 | Hazel Creek Lake | 7152 | L1 | 453 | 453 | Adair | Chlorophyll | 1G |
| 2019 | Lake Springfield | 7312 | L3 | 293 | 293 | Greene | Phosphorus | 1 |

| TMDL Scheduled | Water Body Name | WBID | Class | Impaired Segment Size | Classified Segment Size | County(ies) | Pollutant[1] | Impaired Uses[2] |
|---|---|---|---|---|---|---|---|---|
| 2019 | Lake Springfield | 7312 | L3 | 293 | 293 | Greene | Nitrogen | 1 |
| 2019 | Lake Springfield | 7312 | L3 | 293 | 293 | Greene | Chlorophyll | 1 |
| 2019 | Lake Taneycomo | 7314 | L2 | 2118.6 | 2118.6 | Taney | Nitrogen | 1 |
| 2019 | Lake Wappapello | 7336 | L2 | 8200 | 8200 | Wayne | Phosphorus | 1 |
| 2019 | Lake Wappapello | 7336 | L2 | 8200 | 8200 | Wayne | Nitrogen | 1 |
| 2019 | Lake Wappapello | 7336 | L2 | 8200 | 8200 | Wayne | Chlorophyll | 1 |
| 2019 | Manito Lake | 7198 | L3 | 77 | 77 | Moniteau | Phosphorus | 1 |
| 2019 | Manito Lake | 7198 | L3 | 77 | 77 | Moniteau | Nitrogen | 1 |
| 2019 | Mark Twain Lake | 7033 | L2 | 18132 | 18132 | Ralls | Nitrogen | 1 |
| 2019 | McDaniel Lake | 7236 | L1 | 218 | 218 | Greene | Phosphorus | 1 |
| 2019 | McDaniel Lake | 7236 | L1 | 218 | 218 | Greene | Chlorophyll | 1 |
| 2019 | Moberly Rothwell Lake | 7165 | L3 | 22 | 22 | Randolph | Chlorophyll | 1 |
| 2019 | Monzingo Lake | 7402 | L1 | 898 | 898 | Nodaway | Chlorophyll | 1 |
| 2019 | Nodaway Lake | 7076 | L3 | 73 | 73 | Nodaway | Nitrogen | 1 |
| 2020 | Nodaway Lake | 7076 | L3 | 73 | 73 | Nodaway | Chlorophyll | 1 |
| 2020 | North Lake | 7218 | L3 | 19 | 19 | Cass | Phosphorus | 1 |
| 2020 | North Lake | 7218 | L3 | 19 | 19 | Cass | Chlorophyll | 1 |
| 2020 | Odessa Lake | 7093 | L1 | 87 | 87 | Lafayette | Nitrogen | 1 |
| 2020 | Odessa Lake | 7093 | L1 | 87 | 87 | Lafayette | Chlorophyll | 1 |
| 2020 | Pomme de Terre Lake | 7238 | L2 | 7820 | 7820 | Hickory | Nitrogen | 1 |
| 2020 | Pomme de Terre Lake | 7238 | L2 | 7820 | 7820 | Hickory | Chlorophyll | 1 |
| 2020 | Stockton Lake | 7235 | L2 | 23680 | 23680 | Cedar | Nitrogen | 1 |
| 2020 | Stockton Lake | 7235 | L2 | 23680 | 23680 | Cedar | Chlorophyll | 1 |
| 2020 | Unionville Lake | 7154 | L3 | 74 | 74 | Putnam | Phosphorus | 1 |
| PIL | Straight Fork | 959 | C | 2.5 | 6 | Morgan | Chloride | 1 |

[1](S) = Sediment; (T) = Tissue;
(W) = Water.
[2]Impaired Uses are those beneficial

uses, assigned to this water in state water quality standards, that are not being met due to water pollution. Use codes for impaired uses are: G= General Criteria, 1G = General criteria pertaining to protection of aquatic life, 1= Protection of aquatic life, 2 = Whole Body Contact Recreation (swimming), 3= Public Drinking Water Supply, 4 = Livestock and Wildlife Watering, 5= Secondary Contact Recreation (Fishing and Boating), 6= Irrigation, 7= Industrial Water